Position Paper

Recommendations for ARRA HITECH and Defining "Meaningful Use" for Hospitals

Our proposal centers on delivering results, or outcomes, directly to those whom ARRA HITECH is intended to serve: the patient-taxpayers of the United States. We believe that if we all focus on the outcome of any clinical episode, the record of that encounter, we will best serve the interests of the patient-taxpayers, and bring about the desired improvements in healthcare quality and cost-effectiveness envisioned in HITECH.

Introduction

Picis, as a leading US healthcare information technology provider, has focused its efforts for the past 12 years entirely on the high-acuity areas of hospitals: the emergency department (ED), the operating room (OR) and the intensive care unit (ICU). These areas typically consume as much as 60% of hospital resources, and can drive as much as 70% of revenues for a US hospital. On the "flip side", this means that payers, including the government, should be vitally interested in these and other specialty areas of the hospital (cardiology, oncology, OB/GYN, etc.) as we consider the definition of "meaningful use" under ARRA HITECH.

The purpose of this paper is to convey this perspective to interested parties who are authoring regulations, and who will then be charged with implementing and overseeing HITECH. We believe that there are clear ways to ensure the greatest effectiveness of this investment. However, we also fear that unless a very clear end-state and progressive goals are put in place, along with certain checks and balances to safeguard against ineffective use of the funds, that the program will not lead to the true transformation of our healthcare system that is so badly needed.

Executive Summary

The widespread adoption of healthcare information technology (HIT) holds great promise for the American healthcare consumer, Federal and state governments, and for the medical profession. Provisions of the American Recovery and Reinvestment Act of 2009, if applied optimally, will help drive this adoption and yield the desired benefits.

As a leading vendor of information technology to the US hospital community, Picis suggests, in this position paper, the gradual and specific evolution of "meaningful use" definitions over the time period of the program, allowing hospitals, regulators, standards bodies, the patient community and vendors to collaborate in bringing about the desired results, and doing so in a way that yields the "biggest bang for the buck", at the earliest point in the process.

Our proposal centers on delivering results, or outcomes, directly to those whom ARRA HITECH is intended to serve: the patient-taxpayers of the United States. We believe that if we all focus on the *outcome* of any clinical episode, the record of that encounter, we will best serve the interests of the patient-taxpayers, and bring about the desired improvements in healthcare quality and cost-effectiveness envisioned in HITECH.

Our proposal, outlined in detail below, balances the need for quick action with practical concerns and desired outcomes, and embodies the following three guiding principles:

1. The criteria for meaningful use should evolve in **three predictable time phases – and be guided by the proven progression of *automation, optimization* and *transformation***
2. Prioritization should be placed on the **highest impact areas** of the hospital first; and, by synthesizing these two principles,
3. Implement **focused and specific system functionality**, to drive quality on a care area by care area basis, rather than a broader "computerization for the sake of computerization" approach.

We believe that, if adopted, our approach would clear the way for all concerned to move expeditiously and with a common purpose. By plotting a rational and achievable sequence and timetable for compliance and implementation, we believe that the goals of the program will be achieved with spectacular results. We fear that anything less will result in confusion, inaction, wasted taxpayer money, and squandered opportunity.

First Principles – Focus on the "R" in "EHR"

One cannot help but notice, in all the discussions around ARRA HITECH, that the term "EHR" seems to be used interchangeably to describe both the electronic record itself, and the software systems which create, add to, and manage that record over time. Many mix discussion of "portable and interoperable EHRs" (which are information objects whose ultimate owners are the patient-taxpayers) with "certified EHRs" (which are software systems owned and operated by the hospital community).

We advocate that everyone involved focus on the "R" in "EHR", and all agree on such parameters as data format and record content, interoperability, portability, security, and privacy, and then "let a thousand flowers bloom", in terms of the software required to meet those needs. We would discourage the ONC from writing regulations for meaningful use which "over-specify" the software to be used, or focus on systems that "computerize for the sake of computerization". We assert that we should allow the ingenuity and innovation which characterize American software research and development to meet the needs of the market.

The systems which meet these requirements are likely to come in many "flavors", whether enterprise/house-wide, "best-of-breed"/departmental, ancillary, and/or ambulatory practice systems. (It is estimated, for example, that a modern US hospital may have as many as 200 discrete software applications currently deployed in order to meet its missions to the community it serves). If we all focus on the outcome, the record, we can leave hospitals free to choose the software which best meets their needs, based on case mix, economic realities, IT infrastructure and executive management philosophy, while still achieving the results spurred by ARRA HITECH.

Achieving Results

The goals of the development and widespread use of electronic health records are manifold, and certainly need to be urgently addressed. A recent study indicates that less than two percent of hospitals can claim a fully-automated EHR, and less than 10 percent even a partial EHR in documenting the treatments provided to patients. Further, those institutions that can claim an electronic record generally remain "silos" of this information, with the record and its information unavailable to clinicians in other institutions, physicians' practices, and to the patients themselves.

The entire US healthcare system is burdened by excessive paperwork and a general lack of automation, contributing to the highest per-capita healthcare spending in the industrialized world, low patient satisfaction, and frustration shared by all the participants.

By folding the HIT provisions into ARRA, the administration and Congress have signaled their intent to achieve several goals:

- ***Economic stimulus*** – being part of ARRA, getting the investment and payments flowing in a timely manner is of the essence. Done well, providers will reap the financial benefits of their EHR implementations beginning with FY 2011, and spending will begin now (if it's not already underway) and continue well in advance of October 1, 2010. If the regulations are too ambitious or imprecise, the risk of inaction on the part of providers is great, especially given the current conditions of tight credit and a general lack of access to capital by hospitals.
- ***Cost control and reduction*** – healthcare costs are rising faster than any other component of GDP, and the situation will only worsen as the population ages, unless something is done to control spending and increase the efficiency of care delivery. Healthcare reform will play a large role in this debate, but the HIT provisions of ARRA can contribute significantly as well. Put another way, the HIT provisions of ARRA might be thought of as the first step along the road to long-term healthcare reform, and can build the technology framework for the reform effort, leading to reduced cost without sacrificing quality.
- ***Fostering a culture of continuous improvement and best practices*** – likewise, providers are incented, through such devices as core quality measures within the CMS regulations, to continue to improve the delivery of care. And, by their very nature, clinicians strive for improving care on an ongoing basis.
- ***Delivery of high-quality care*** – most Americans would agree that our present healthcare system delivers amazing results for those who have access. The overarching goal that must not be sacrificed as reduce costs, improve efficiency, drive automation, and increase access. The last decade specifically has seen an unprecedented focus on patient safety, reducing medical errors, and quality reporting that must remain a driving force for continuous improvement in care.

Each of these goals is noble in its own right, and when taken together they will go a long way toward improving the US healthcare system. Few would argue with the need or the goals. What is required is a practical roadmap for reaching these goals. By setting the "rules of the game" in an achievable and predictable fashion, and making that roadmap readily available to all parties, the entire healthcare system will benefit, and be able to follow a more orderly transition to the electronic future we all desire.

The First Recommendation – Raise the Criteria for Meaningful Use Over Three Phases

With so little current real adoption of healthcare IT systems, and a deadline looming in less than 18 months, we would assert that a "big-bang" implementation strategy is impractical, and perhaps even damaging, for all involved. Picis advocates the adoption of a three-step approach, based on the pattern we have seen hospitals successfully adopt and follow as they move along a continuum over time. These phases should be implemented, in the same 2-year increments being recommended currently by HIMSS and others.[2]

1. ***Phase I – Years 1 and 2: The Automation/Adoption Phase*** – the first step in the journey is to remove the paper from the system, and move to electronic documentation of patient encounters. This alone will help reduce the cost of healthcare delivery. And, this is the step that is most readily achievable today, as there are a number of commercially-available "off-the shelf" software solutions for many common hospital automation applications.

    By automation we mean that manual, error-prone and inefficient processes are reengineered as they are automated or computerized. This is important in that automating "bad processes" will lead to little gain for health systems so an inherent process improvement is implied in our definition of the automation or adoption phase.

    Automation, if coupled with a focus on interoperability, also offers an immediate benefit not just to providers and clinicians, but also to all patient-taxpayers – it will ensure that clinicians who might later treat that patient are dealing with the most current and complete information possible. It will provide a "360-degree view" of a patient's medical history.

    If we insist on interoperability between hospital departments, and between provider organizations (including physicians' practices), patients will see a whole new level of seamless interaction between their clinicians, and be able to take a more active role in their own healthcare decisions. They will feel ownership for their healthcare information, and play an active role in their own care. It will send a clear signal to providers that consumer-driven healthcare has arrived, and that patients' information cannot be "held hostage" within the "silos" of an institution or health system. This will provide the first step in moving patient information from an "intramural" approach to one that will become regional, national and location-independent over time.

    As cited in the study by the National Academy of Sciences[3] entitled *Computational Technology for Effective Health Care*, unless information is made widely available, and

outside the confines of a given provider institution, even large EHR investments yield insufficient results. At the current rate, the NAS fears that the Institute of Medicine's (*To Err is Human*, 1999)[4] vision of a cognitive, interoperable healthcare IT infrastructure that results in a 50% reduction in medical errors will never be realized. We thus believe that interoperability is a key ingredient in the widespread adoption of EHR technology, and that interoperability must be encouraged, and eventually mandated, beyond the walls of a given provider, in order to be truly effective.

While not all the standards are yet firmly in place, standards for health information exchanges (HIEs) are already a reality. The harmonized standards put forth by HITSP[5] panel with implementation guidelines recommended by the Integrating the Healthcare Enterprise (IHE)[6] have also been proven in real clinical settings as an achievable set of implementation guidelines among multiple HIT vendors' systems.

2. ***Phase II – Years 3 and 4: The Optimization Phase*** – once basic automation has been achieved, and interoperable EHRs are a reality, the hospital and the medical community now have a wealth of information upon which to base decisions on improving operations, reducing costs, increasing efficiency, and providing better care, all within the confines of the current operational norms. This next phase is critical to improving the overall financial health of the system, and to achieving the cost savings estimated by the Congressional Budget Office (CBO) in its analysis of the impact of HITECH.

   For example, simple measures, such as ensuring the timely administration of preoperative antibiotics, can yield enormous and immediate clinical and financial benefits. Information on length of stay, patients left without being seen, door-to-doctor time and other parameters can make emergency departments aware of their challenges, and provide a template for action and improvement. Likewise, tracking how hospital-acquired infections can affect patient length of stay in the ICU can dramatically reduce costs and improve patient care and patient safety.

3. ***Phase III – Years 5 and 6: The Transformation Phase*** – the final step, and the most difficult to achieve, logically follows the other two. With an automated system now well-established, and armed with the results of the optimization process, hospitals can begin to truly transform how they do business **and only in this phase can we truly expect to see major advances in quality.**

   There is also a very important role for government to play here. The true leverage in transformation comes from comparative effectiveness research, based on nationally-aggregated data, to arrive at "best practices" recommendations. The scale of such an endeavor is beyond a single hospital, and even beyond the largest integrated delivery networks (IDNs) and industry standards organizations. We would envision this aggregation and analysis being coordinated by such groups as NIH, the CDC, AHRQ and others, in conjunction with industry groups such as the AMA and those representing various medical specialties (ACEP, SCCM, ASA, etc.).

This Transformation phase is the ultimate goal that all of us in healthcare are seeking. The following is excerpted from the above-cited National Academy of Sciences study:

> “Despite a strong commitment to delivering quality health care, persistent problems involving medical errors and ineffective treatment continue to plague the industry. Many of these problems are the consequence of poor information technology (IT) capabilities, and most importantly, the lack of cognitive IT support. Clinicians spend a great deal of time sifting through large amounts of raw data, when, ideally, IT systems would place raw data into context with current medical knowledge to provide clinicians with computer models that depict the health status of the patient.
>
> “*Computational Technology for Effective Health Care* advocates re-balancing the portfolio of investments in health care IT to place a greater emphasis on providing cognitive support for health care providers, patients, and family caregivers; observing proven principles for success in designing and implementing IT; and accelerating research related to health care in the computer and social sciences and in health/biomedical informatics.”

We recommend that the regulation-writing process include an acknowledgement of this time-tested and successful three-phase progression, to ensure that benefits begin to flow early, and continue throughout the life of the program and beyond.

The Second Recommendation – Attack the Highest Impact Areas of the Hospital First

Not all hospital specialties are created equal, in terms of their contribution to the nation's healthcare bill. In particular, surgery by far accounts for the largest proportion of hospital revenue, and thus payer cost (payers including the Federal and state governments, in addition to private insurance and patient self-pay). We recommend that the regulations and certification processes focus on the automation of the areas of highest cost intensity first. Table 1 shows the breakdown of hospital revenue by specialty from a survey conducted in 2007 and 2008.[7]

Specialty	Average Revenue Generated	Percent of Total
Surgery (all types)	$6,933,333	21.4%
Cardiology	$2,629,051	8.1%
Emergency Medicine	$2,037,500	6.3%
Radiology	$1,988,888	6.1%
Internal Medicine	$1,933,334	6.0%
OB/GYN	$1,744,444	5.4%
Oncology	$1,685,714	5.2%
Family Practice	$1,658,823	5.1%
Gastroenterology	$1,462,500	4.5%
Pulmonary	$1,462,500	4.5%
Urology	$1,357,142	4.2%
Otolaryngology	$1,333,334	4.1%
Occupational Health	$1,250,000	3.9%
Nephrology	$1,166,666	3.6%
Psychiatry	$1,045,454	3.2%
Pediatric	$981,818	3.0%
Ophthalmology	$928,571	2.9%
Neurology	$833,333	2.6%
Totals	$32,432,405	100.0%

Table 1 – Breakdown of Hospital Revenue by Specialty, 2007/08

As can be seen, nearly 60% of costs are concentrated in the top six specialties (surgery, cardiology, emergency, radiology, internal medicine and OB/GYN), and we advocate that these areas of the hospital receive the highest priority, from the very beginning of the program. The aging population increasingly seeks and receives care in the higher acuity areas of the hospital, the ED, the OR and the ICU and this trend is expected to surpass 80% of all hospital costs and revenues in the next 10 years.

By authoring ARRA HITECH regulations that encourage hospitals to focus their information technology efforts on the highest impact (by cost, revenue and outcomes) areas of the hospital, eighty percent of costs would be covered by the above six specialties plus the next set down the list through Otolaryngology, and should be dealt with in a proposed second wave. A third and final wave would include the remaining departments/specialties, thus achieving house-wide automation, but doing it in a logical and cost-effective manner over a time period that hospitals would find achievable.

We believe, for example, there has been undue attention paid toward the general initial goal of initiating computerized physician order entry across the broad hospital base as a priority. It is our proven experience that it is precisely the lack of comprehensive, intuitive, cognitive systems in place today in the high impact area that leads to the lack of physician buy-in and adoption. With the more proven, focused systems in high acuity, physician adoption for all functions including order entry can reach averages of 95%. With the less functional and intuitive systems being offered today, that same physician adoption rate averages under 10%.[8]

This orderly implementation by department/specialty yields another important benefit. The legislation specifies the designation of a standards committee, and that that group turn to one or more accepted industry standards bodies to certify the completeness of solutions to be deployed. As we pointed out in a previous position paper, there are no current certification criteria across all application categories, and in some cases (surgery and intensive care, for example) current certifying bodies (CCHIT, e.g.) do not even have them on their current roadmap for development.

By adopting a departmental/specialty dimension to the implementation of the legislation, the applicable certification body(ies) would be able to program well in advance the sequence of certification programs to be developed, allowing time for due consideration in each. And, should re-prioritization be required, all involved would be brought into agreement with the revised roadmap. Otherwise, we fear that critical certification programs will be impossible to develop and launch before the beginning of FY 2011, or will be hastily developed, not serving the need for comprehensive solutions to be deployed in the various areas of the hospital.

By accommodating adoption of departmental solutions which are able to comprehensively document entire episodes of care, hospitals will be able to achieve financial benefits early on, which will support subsequent phases of adoption. Further, patient benefits will begin to accrue immediately in these critical areas of the hospital.

We have already seen in the Institute of Medicine's June 2006 report, "Hospital-Based Emergency Care: At the Breaking Point[9]," that implementing a comprehensive Emergency Department Information System (EDIS) is recommended as one of the key ways hospitals can address their growing priority of improving care quality in the Emergency Department.

We therefore recommend that certification be immediately re-prioritized to focus on the following care areas, where the impact on care quality and efficiency for the entire hospital will be most profound (please note that certification programs already are in place for Inpatient EHR and Emergency Department systems):

Recommended Priority List for Improving Quality in the Highest Impact Hospital Areas:

1. Operating Room Management Information Systems
2. Critical Care Management Information Systems
3. Emergency Department Information Systems
4. Cardiology Management Information Systems
5. Radiology Department Information Systems
6. OB/GYN Information Systems
7. Oncology Management Information Systems

After programs for these areas are implemented, the ONC-mandated certification group would then move on to the next set of care areas, and so forth, until the entire hospital enterprise is covered, and hospitals can then be assured that any system, in any department, can be implemented with confidence that "meaningful use" will be achieved and maintained.

In our polling of customers through a study we conducted by the Health Management Academy[10] (HIT Adoption under ARRA and C-Suite Perspectives) comprising the opinions of over 60% of the nation's hospitals, we fear that the regulations might be written for meaningful use that would encourage hospital decision makers to opt for broad, sweeping computerization of a certain percentage of hospital beds in order to qualify for funding rather than concentrating their efforts on the high priority, high acuity and high impact areas of the hospital with more focused results and thus, much greater overall increase in care quality and improved outcomes.

The Third Recommendation – Implement Focused and Specific System Functionality over Time

While many off-the-shelf applications are available today, they offer varying levels of desired functionality, including that in areas mentioned in the legislation (ePrescribing, CPOE, interoperability with healthcare information exchanges and personal health records, for example).

In some cases, this is simply a result of vendors' not yet achieving these levels of functionality, and time is needed to close the gap. In other areas, standards are nascent or evolving, and time will be needed for the industry to coalesce around a common set of standards to drive widespread adoption. In still other areas (CPOE being the most obvi-

ous), adoption of even those systems that are available has been slow and/or their efficacy is still unproven.[8]

It is impractical to believe that a "big-bang" of functionality can issue forth in a short period of time from the entire vendor community, or that it could all be absorbed by the hospitals in time for the beginning of the flow of funding at the beginning of FY 2011. Thus, we believe that specification of a sequence of functionality that qualifies for funding must also be part of the consideration.

Synthesis – Putting it All Together

If we aggregate and synthesize these three parameters – a stepwise transition to EHRs, attacking high-cost hospital areas first, and encouraging the orderly march of increasing functionality, it is possible to develop an overall timetable for what "meaningful use" would encompass over time. That synthesis is summarized in Table 2.

	Phase 1 **The Automation Phase** **In Place by the Beginning of FY11**	Phase II **The Optimization Phase** **Beginning of FY13**	Phase III **The Transformation Phase** **Beginning of FY15**
Overall Goals	*Automation of paper-based* clinical documentation (presenting problem, diagnoses, treatments, etc.) to improve coordination of care and reduce costs (redundant tests, e.g.)	*Optimization* - Expand automation with implementation of, or connections to, off-the-shelf CPOE and clinical decision support systems to optimize workflows and further reduce cost	*Transformation* of healthcare through use of comparative effectiveness research. Using the data accumulated over many years, and across hospital systems, develop best practices, which loops back to clinical decision support and CPOE advances
Interoperability with HIEs	Provide a permanent electronic record of each encounter – the ability to contribute to and draw from local/regional repositories, e.g., HIEs, according to the current IHE and CCR/CCD standards. Summaries of care (in bit-map form, such as PDF files) are acceptable.	Extend interoperability across hospital systems and within regions via preliminary HIE integration. Clinical discrete data, in conformance with SNOMED and/or ICD-10 standard(s) is required.	Regional HIEs join into a national network. The HIEs' value is realized, augmenting safer, more timely, efficient, effective care. Non-integrated applications silent to the HIE would lose certification. Aggregated health data is the basis for coding, billing and quality reporting to payers
Interoperability with PHRs	Demonstrate interoperability between application and at least one recognized PHR	Continue/extend PHR support as data exchange standards are implemented across multiple, recognized PHRs	Applications provide interface with any PHR which is nationally implemented and recognized
Certifications Applicable	Begin certification for most critical and cost-intensive areas of hospital for current and one prior release of software applications	Extend certification to the most critical and cost-intensive areas of the hospital - OR, ICU, Cardiology, Oncology, OB/GYN (Inpatient EHR and ED CCHIT certifications are already in place as of 2008)	Certification for the remaining care areas that make up 80% of costs, applied within and across hospital systems
ePrescribing and other House-Wide Interoperability Capability	ePrescription interfaces exist between clinical applications and pharmacy systems (internal to hospital and with external exchanges)	Add capability to provide interfaces for Labs, Radiology and other departments, and introduce elements of Advanced Clinical Order Management (ACOM), including efficacy and cost optimization	Full deployment of ACOM principles to include interfaces and decision support capability to ensure efficacy and cost optimization goals are realized

Table 2 – Proposed Timeline and Specific Goals for Achievement of Evolving Definitions of "Meaningful Use" in Three Phases

	Phase 1 **The Automation Phase** **In Place by the Beginning of FY11**	Phase II **The Optimization Phase** **Beginning of FY13**	Phase III **The Transformation Phase** **Beginning of FY15**
Establishing Medical Necessity for CMS alignment	Demonstrate accuracy of clinical documentation supporting precise assignment of CPT codes, ICD-9 codes and (for admitted patients) DRGs. Initiatives supporting appropriate assignment of Observation status and Inpatient status decisions. Facility clinical diagnosis and treatment policies are integrated into electronic health record (EHR).	Change healthcare industry standard of retrospective paper- based review of medical necessity. Automate clinical documentation improvement (CDI) programs so that CDI occurs as part of physician documentation concurrently during patient care.	Analysis of hospital resource use, cost and reimbursement leads to electronic benchmarks and dynamic dashboards. Practitioner and hospital-specific feedback, based on dashboards, is used to manage efficiency and reduce cost. Retrospective medical necessity audits (e.g., RAC) will be less necessary as providers and hospitals manage resource use in real time. Hospitals and providers use more precise data to negotiate fair reimbursement for services provided. CMS uses data to refine cost and reimbursement definitions by condition.
Clinical Decision Support	Basic departmental reporting exists in the form of operational reports, dashboards and business intelligence to support in-house data analysis and decision-making	Clinical rules engine allows hospital to implement and monitor standard procedures for treatment	Clinical Decision Support integrated with HIE to define and implement best practices within and across hospital systems on a nationwide basis.
Quality Reporting	Electronic documentation replaces paper. Enhanced communication between community healthcare providers leads to measurable quality and cost savings. Best clinical practices evolve within a given hospital system.	Quality metrics abstracted from systems is accepted by practitioners and hospital leaders. As a result of Phase I success, physicians and hospitals create gain sharing arrangements tied to efficiency, quality, cost reduction and ultimately data reporting within single practitioner communities. Community balanced scorecards, demonstrating cost-effective quality, would be based on benchmarks demonstrating best practices. Benchmarks shared with patients as the basis for self-directed decisions.	Quality optimized by sharing of best practices using integrated HIEs. The HIEs' value is fully realized, augmenting safer, more timely, efficient, effective care. Aggregated health data is the basis for coding, billing and quality reporting to payers. CMS audits of quality and medical necessity (RAC), evaluation of core measures compliance (2005 DRA, etc.) and adjusted morbidity and mortality (AHRQ) would be tied to financial performance and payment through one unified national database.

Table 2 (Concluded) – Proposed Timeline and Specific Goals for Achievement of Evolving Definitions of "Meaningful Use" in Three Phases

Summary

In summary, Picis recommends a phased approach to meaningful use criteria that correlates with the best practices and proven adoption phases of successful healthcare information systems. These three phases are ***automation/adoption, optimization*** and ***transformation.***

This will allow ARRA HITECH funding to flow in the quickest possible fashion, yet will raise the bar over time and in a predictable manner, in order to realize the ultimate goals of the funding – ***to drive quality*** and ***efficiency***.

For example, a hospital seeking to be a meaningful user would be incented to be very careful in its selection of systems that not only help them automate today, but optimize and transform healthcare tomorrow. That hospital would avoid installing (and we taxpayers would avoid paying for) unproven or broad, low-function systems, only to discover later that cognitive decision support and quality reporting are not part of the functional set or product roadmap. This will ensure that the ARRA HITECH money is spent wisely, and that both vendors and hospitals will drive the innovation necessary to reach the overall quality goals.

Picis also recommends that the funding be prioritized for those areas that have the ***greatest impact for increasing care quality***, the higher acuity areas such as ***surgery, emergency care, intensive care, cardiology, OB/GYN and oncology***. These areas comprise the majority of hospital costs and revenues, and will also have the greatest impact on realizing the goals of the healthcare reform legislation that will surely be forthcoming.

In addition to the measures already discussed in the Act and elsewhere, Picis recommends aligning the definition of meaningful use with the definition of ***medical necessity***. Medical necessity is the criteria used by CMS to determine care reimbursement. Aligning these definitions will ensure that the increasing goals and objectives of CMS to incent better quality care through reimbursement measures will be realized.

Picis believes that without consideration of these recommendations that hospital executives will attempt to simply install broad, minimally functional (and thus minimally results-driven) systems in order to satisfy an initial lower threshold for meaningful use. Our strongest recommendation is that the regulations are worded so that those health systems that prioritize driving improved care quality and outcomes in more focused, higher impact areas of the hospitals are both eligible for full funding under ARRA HITECH and encouraged or rewarded to achieve these results versus broader "computerizing for computerizing's sake."

Picis experts, with many years of practical experience in the hospital, stand ready to assist congressional staffs, CMS, AHRQ, HHS and the ONC in developing and refining the regulations to implement ARRA HITECH to achieve the best outcomes for the American taxpayer and healthcare system. We welcome feedback and discussion of the proposals set forth here.

[1]Jha et. al., “Use of Electronic Health Records in U.S. Hospitals”, New England Journal of Medicine, 16 April 2009.

[2]HIMSS has published a similar outline for “meaningful use” on its website, at http://www.himss.org/content/files/2009HIMSS_DefUseHospitals.pdf?src=winews20090429

[3]National Academy of Sciences: (Computational Technology for Effective Health Care: Immediate Steps and Strategic Directions, 2009) http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12572 for a summary.

[4]Institute of Medicine: (To Err is Human: Building a Safer Health System, 1999) http://www.iom.edu/Object.File/Master/4/117/ToErr-8pager.pdf

[5]HITSP website: http://www.hitsp.org/

[6]Integrating the Healthcare Enterprise (IHE) website: http://www.ihe.net/

[7]Jackson & Coker survey cited. Other similar surveys are directionally consistent, even if the percentages vary slightly. See www.JacksonCoker.com

[8]KLAS Research (CPOE Digest 2009: Meaningful Use and Physician Adoption), available from KLAS Research, http://www.klasresearch.com/KLAS/Site/

[9]Institute of Medicine: (Hospital-Based Emergency Care: At the Breaking Point, 2006)

[10]Health Management Academy (HIT Adoption under ARRA and C-Suite Perspectives, 2009)

About Picis, Inc.

Picis is a global provider of information solutions that enable rapid and sustained delivery of clinical, financial and operational results in the acute care areas of the hospital. These high-acuity areas include the emergency department, operating and recovery rooms, and intensive care units. Picis offers an advanced suite of integrated products focused on these life-critical areas of the hospital where the patients are the most vulnerable, the care process is the most complex, and an increasing majority of hospital costs are concentrated. Headquartered in Wakefield, Massachusetts, Picis has licensed systems for use in more than 1,700 hospitals. More information is available at **www.picis.com**.

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Delivering results in high acuity®

100 Quannapowitt Parkway, Suite 405
Wakefield , MA 01880
Tel: 781 557 3000
Fax: 781 557 3140
www.picis.com

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