American Hospital Association
Principles for
Realizing the Promise of Information Technology

Many hospitals and health systems have been pioneers in harnessing the opportunity of information technology (IT) to improve patient care and quality.   We are now challenged to extend the use of IT and integrate it into routine care processes in hospitals big and small, in both rural and urban areas. The Administration and Congress have prioritized adoption of IT, and in particular electronic health records (EHRs). The AHA will be a leader and partner in bringing the promise of IT to health care. The following principles will guide the association's efforts:

1. IT is an enabling tool for improving quality and safety.

The work of hospitals is caring for patients. Every day they strive to improve the safety and quality of that care. Research has shown that certain kinds of IT—such as computerized provider order entry (CPOE), computerized decision support systems, and bar-coding for medication administration—can limit errors and improve care. But IT adoption alone is not the goal. Rather, investments in IT should be driven by the quality and safety improvement opportunities they bring. IT can help ensure that the right information is available in the right place at the right time to treat patients. IT can also be a tool for improving efficiency.

2. Standards for interoperability should be harmonized and operationalized.

The full promise of health IT will come when health information can be easily transferred from one computer system to another. The ability to easily exchange health information in a meaningful way—or interoperability—is needed both across departments in a single hospital and among health care providers. The exchange of health information requires that it be in a structured format that can be recognized and "understood" by a computer. Standards are needed for the vocabulary, content, and messaging of information, so that data from one system can be seamlessly incorporated into another. Given the complexity of health care, standards are needed in many different areas, but coming to agreement on a set of standards is crucial. It will also encourage further use of IT by decreasing the costs and facilitating the exchange of data.

Standards-setting organizations have already developed many different standards, with multiple standards to choose from in some areas. For example, LOINC is a standard vocabulary to describe laboratory values. DICOM is a standard for transmitting digital images. SNOMED provides a vocabulary for medical practice. The HL7 standards address messaging. In other areas, such as clinical documentation, no standards have yet been developed.

Coming to agreement on the standards to be used will require collaboration and a private-public partnership that prioritizes where standards are needed, follows a consensus-building process to determine which standards to adopt, and ensures that they can be operationalized. Key stakeholders, including providers, payers, standards organizations,

vendors, and regulators must be part of the discussion and agree to an implementation process. This process has begun under the American Health Information Community established by the Administration, and must move as quickly as possible. An early task for the group will be development of a timeline that is realistic, and sets out goals for reaching agreement and moving forward.

As was learned through the HIPAA administrative simplification process, standards adoption must also be accompanied by detailed guidance on how they should be implemented. Hospitals will also need to provide continuity of operations as they transition from their legacy systems to the adopted standards. Implementation will require examination of the kinds of transactions that are likely to occur, what business processes support them, and what steps need to be taken to ensure that all end users are implementing the standards consistently.

3. Information exchange should be promoted as a public resource.

Use of EHRs within hospitals and physician offices promises to improve quality of care. However, even greater benefits can be obtained from the sharing of information across health care providers, so that, for example, emergency department staff can see medical histories, and primary care physicians can know what medications were given during an inpatient stay. Some hospitals have more advanced IT systems than the physicians practicing in their community. To facilitate sharing of clinical information and improve patient care, hospitals may want to provide community physicians with hardware, software, or other assistance that would allow them to maintain EHRs for their patients. However, hospitals in this situation must be careful of the Stark and anti-kickback laws, which prevent physicians from referring patients to hospitals or other providers with which they have a financial relationship for most services. Obtaining exceptions and safe harbors to these laws is essential to facilitate IT adoption and information exchange.

Health information cannot be seen as belonging to an individual organization. Improved clinical care will come when the right information is available to the right provider at the right time, so that it can be used in caring for the patient. Achieving that goal requires a model where the data do not belong to an individual organization, physician, or vendor, but become a public resource that facilitates information exchange. Local and regional networks for information exchange have begun to emerge, but are still in their infancy. More work is needed to understand the governance structures necessary to promote information exchange and the financing strategies needed to build this kind of public resource. Having standards for information exchange will also be necessary.

4. Privacy and security of electronic records are paramount.

Americans trust hospitals with their lives. Hospitals are committed to protecting that trust -- both in the care that is provided and in the protection of patients' health information. Historically, hospitals have worked diligently to ensure the privacy and security of personal health information and continue to do so under the provisions of the Health Insurance Portability and Protection Act of 1996. They must be vigilant in maintaining and upgrading those systems over

time. However, the multiplicity of privacy rules from states, local governments, accrediting bodies, and other organizations that can be laid on top of the HIPAA requirements makes compliance difficult and can interfere with patient care. Simply laying out all of the relevant state, federal, and other rules can be a monumental task, let alone determining how to comply when they may conflict. A single set of privacy rules is needed to facilitate the use of IT, ensure access by health care providers to needed information at the point of care, and allow patients and families to share information about themselves with their care providers.

5. IT should help maximize patient participation in care.

Today, medical records primarily reside with the providers of care. However, giving patients access to their health information can help them become more involved in their care, and make decisions regarding their own care or the care of their family members. Patients can also contribute valuable information to their health records that can help in choosing treatment plans, such as which medications they are actually taking, or frequent measurements of weight, blood pressure, or blood sugar levels. Some people are adopting personal health records that they maintain, either on their own or with their insurers. As hospitals and other providers adopt EHRs, they should consider how and when patients could access them, and whether they can interact with personal health records maintained by patients.

6. Successful IT adoption requires addressing barriers.

It is time for the benefits of IT to be realized throughout the health care system. Encouraging adoption by hospitals will require lowering critical barriers, such as the high costs of acquiring, maintaining, and upgrading systems of IT and the lack of financing to do so. IT products currently on the market do not routinely work together, so that connecting separate systems requires expensive customization. In addition, they often do not meet the needs of healthcare professionals and may not always add value. Availability of well-trained IT staff may become a constraint as more hospitals implement IT. Finally, successful implementation of IT that improves safety and quality requires significant changes to work processes. Hospital staff, IT professionals, and physicians must work together to create better ways of caring for patients. Ultimately, IT should be a tool not only for improving quality, but also for improving the professional lives of our care providers. It should enable them to be more efficient and effective, find their jobs more rewarding, and engage in continuous learning.

Adoption is likely to be incremental and evolutionary, with hospitals focusing on applications that add value and that make sense given their stage of adoption and quality improvement priorities. Hospitals can help each other through sharing lessons learned and peer-to-peer connections, which AHA will facilitate. We must also work with Congress, plans, employers, and vendors to lower the financial barriers. Technical assistance on how to work with clinical staff and vendors may increase the odds of successful implementation. Certification of IT products can build confidence among buyers in their ability to perform and give vendors guidance on the functions to build into their systems.

7. IT must be a shared investment.

Hospitals and health systems currently bear the sole burden for implementing costly IT systems in their facilities. The costs of implementation and ongoing maintenance vary by the size of the hospital, as well as by the functions to be installed. A full clinical IT system that includes CPOE and an EHR will cost tens, if not hundreds, of millions of dollars. CPOE on its own has been estimated to cost about $8 million for a 500-bed hospital (First Consulting Group 2003). And, of course, initial investments must be supported by ongoing maintenance and upgrading. Hospitals make these investments because they improve quality and safety and because it is the right thing to do. However, in a world of shrinking margins and competing demands for capital, not all hospitals can finance these systems. Moreover, the financial benefits of IT investment often accrue to payers, employers, and other purchasers of care through decreased lengths of stay and fewer admissions, not to hospitals themselves. As major beneficiaries of IT investments, employers and payers (including the federal government) must share in the costs of investment. Possible mechanisms for the government, employers, and payers to finance IT include low-interest loans, targeted grants, and increased reimbursements for those using IT.

Approved by the AHA Board
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