

Building the Work Force

for Health Information Transformation





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Executive Summary

As the transition to an electronic health record gains momentum, healthcare delivery will need to dramatically reinvent the way it collects, processes, and uses health information. This will require a substantial investment in healthcare infrastructure in both public and private sectors. It will require an investment of capital, time, and resources. Most importantly, it will require an investment in people.

A work force capable of innovating, implementing, and using health communications and information technology (IT) will be critical to healthcare's success.

Conversely, without such a work force, implementations will fail or could even cause harm. There are two contingents in this health information work force: people who specialize in health information management, applied clinical informatics, and information technology resource management, hereafter referred to as "health information specialists," and those who must use health information technology and electronic health records (EHRs) to perform their duties.

But while the need for a health information specialist work force is growing, the number of trained professionals is not keeping pace. Furthermore, no systematic plan exists for training the members of the current healthcare work force to use IT tools to do their jobs. Without a plan to train clinicians and existing health information specialists at all levels of healthcare delivery, the goal of an improved, interconnected healthcare system may never be met, and the industry may lose much ground in terms of quality safety, and efficiency as it moves toward an electronic future.

To address this, in terms of quality, safety, and efficiency, **the American Health Information Management Association (AHIMA) and the American Medical Informatics Association (AMIA) hosted a November 2005 summit in Washington, DC, to review and clarify the issues and develop initial strategies to address work force challenges related to EHRs and a nationwide health information infrastructure.** A broad representation of industry stakeholders from academia, professional associations, provider organizations, business professionals, and government officials participated.

The summit participants were asked to develop recommendations to ensure:

- A trained work force specializing in applied clinical informatics, information technology, and information management
- More broadly, that employees in all areas of healthcare have basic IT skills
- All citizens and patients have the knowledge and skills to use information technology to manage their healthcare



Executive Summary

The participants developed targeted recommendations that the industry—including employers, employees, vendors, the government, and professional organizations—can use to prepare the existing health work force to use technology tools and ensure a sufficient number of well-qualified health information specialists to achieve the health IT transformation. The result of the summit—a national work force action agenda—is summarized in this report.

The group issued these recommendations:

1. Adopt the vision of the Institute of Medicine “Crossing the Quality Chasm” report with its important role for healthcare information technology to improve quality, safety, and cost-effectiveness of care. Use this vision to educate the healthcare industry, employees, and employers at all levels that information technology is an integral part of healthcare work.
2. Create incentives to align performance and reward systems in healthcare practice environments to include informatics in professional goals and competencies, and encourage the healthcare work force to see health information competencies and skills as professional and personal goals.
3. Escalate industry-wide advocacy on a collaborative basis on the scope and importance of the health information specialist work force and its significant impact on implementation of the electronic health record and information technologies throughout the continuum of care.
4. Build awareness of the important need for public and private sector funding and facilitating training of the healthcare work force to use health information technology through messages circulated among employers, associations, vendors, payers, and the government.
5. Engage consumers as key stakeholders in the new healthcare work force by informing the public about the importance of healthcare information technology and how it can improve the quality of healthcare delivery to them.
6. Utilize innovative learning environments with robust health information systems for continuous delivery of education and training to the healthcare information specialist work force at all levels, and ensure access to training through multiple delivery methods including electronic learning formats.
7. Prepare a stronger health information specialist work force for the future through formal education. Ensure facility competencies in the electronic health information environment. Market health informatics/information management/information technology related careers to young people to increase the number of qualified participants entering the field.
8. Disseminate tools for the healthcare work force through the sharing of information and best practices from other industries and from each other. Share best practices and understand culture changes from international colleagues that have implemented health information technologies.
9. Prepare the industry for patients who will increasingly manage their own health information and work with consumers and health professionals to educate them about the benefits, risks, and costs of personal health records.



Resolving healthcare work force issues will require action on the part of many stakeholders, including employers, employees, vendors, the government, and professional organizations. All these groups will realize the benefits of improved use and knowledge of healthcare information technology. Clinicians who are comfortable with and supported in the use of technology will make better use of it to benefit patients, and the health information specialist domain will continue to attract employees seeking important and satisfying work. Based on the summit recommendations, this report also offers some specific steps for each group.

The participants in the AHIMA/AMIA 2005 work force summit believe the work force issues comprise a crisis that warrants immediate action. Employers, employees, vendors, associations, and the government must take action to ensure the health IT work force crisis is addressed.

AHIMA and AMIA intend to do the following:

- Jointly define a multi-year work force research agenda and seek funding from federal sources and private foundations.
- Secure a legislative solution to address work force development and retraining shortfalls.
- Convene a joint task force to define basic competencies for those who use EHRs in their daily work.
- Engage informatics and information management education leaders in preparing a vision of the academic resources and network needed for health information education leadership in the US.
- Enlist the support of other key associations in these efforts, such as medical specialty associations, the American Nurses Association, the Healthcare Information and Management Systems Society, the American Hospital Association, the College of Healthcare Information Management Executives, and others.

- Convene a second work force summit in 12 months to assess progress on the work force action agenda.
- Broadly publicize these recommendations to those whose support is needed to move the action agenda.

Working together, the industry can train existing healthcare information workers, recruit new ones, improve healthcare information education, and make the goal of a truly 21st century healthcare system a reality. Accomplishing these tasks is both our challenge and our opportunity.

Background

In 1992, economist Robert McTeer wrote that a well-educated, well-trained labor force is more likely to recover from job losses in a declining industry and adapt to the requirements of new industries. “Only education followed by constant reeducation and training can help bridge the gap,” he wrote. “Instead of asking whether the US economy will create enough good jobs, we ought to be asking whether our educational system will produce enough qualified workers.”¹



Background

Over a decade later, we are still asking this question. For the healthcare industry, the stakes are higher than ever before. President George W. Bush has called for all Americans to have access to computer-based health records to improve their care by 2014. According to the Department of Health and Human Services' Office of the National Coordinator for Health Information Technology (ONC), the vision for a framework for a national health information network includes electronic health records (EHRs) that would be in widespread use. Information would be easily shared, and as a result, the health of the population would improve.

As the move to an electronic health record gains momentum, the industry will need to dramatically reinvent the way it collects, processes, and uses health information. Such a call to action will require a substantial investment in healthcare infrastructure in both public and private sectors. It will require an investment of capital, time, and resources. Most importantly, it will require an investment in people.

A work force trained to implement and use health communications and information technology (IT) will be critical to healthcare's success. Conversely, without a work force capable of innovating, implementing, and using technology, such implementations will fail or could even cause harm. There are two contingents to this health information work force: people who specialize in health information management, applied clinical informatics, and information technology resource management, hereafter referred to as "health information specialists," and those who must use health information technology and electronic health records (EHRs) to perform their duties.

While other dimensions of the challenge to create a national health information infrastructure received attention at the federal level, very little attention is given to work force considerations. The challenges include having sufficient numbers of well-educated health information specialists as faculty and researchers to help lead education and ensure adequate numbers of health information specialists to train users, both health system workers and the general population.

Recent reports from the Institute of Medicine that build upon the "Crossing the Quality Chasm" report include "Health Professions Education: A Bridge to Quality" (2003), "Health Literacy: A Prescription to Ending Confusion" (2004), and "Building a Better Delivery System: A New Engineering/Health Care Partnership" (2005). The 2003 report identified informatics as a core competency needed in a 21st century healthcare system. Through the use of informatics and related tools, health professionals will be able to "reduce errors, manage knowledge and information, make decisions, and communicate more effectively than has been the case in the past," the report said.²

But while the need for a health information work force is growing, the number of trained professionals is not keeping pace. The problem is not a new one. As early as 2001, the US Department of Labor's Bureau of Labor Statistics projected a 49 percent growth in the number of health information management (HIM) workers by 2010.³ It is unlikely that this forecast took into account the nationwide initiative to accelerate the transition from paper to electronic health records.

The 2001 data did not take into account the tremendous work force ramp-up we now expect during the next several years. No systematic plan exists for training the members of the current healthcare work force to use IT tools to do their jobs and to design and implement systems that improve patient care. Without a plan to train clinicians and existing health information specialists at all levels of healthcare delivery, the goal of an improved, interconnected healthcare system may never be met, and the industry may lose much ground as it moves toward an electronic future. When one looks at the general work force challenge faced by the healthcare industry, a wise use of technology offers the best potential opportunity to make real productivity gains.

Addressing the Crisis

While the American Health Information Management Association (AHIMA) and the American Medical Informatics Association (AMIA), have been focused on developing the information management and informatics work force for some time, they have not previously focused upon addressing the public policy dimension of this issue.

In 2001 AHIMA/FORE contracted with the Center for Health Workforce Studies at the University at Albany, State University of New York, to conduct a major HIM work force study. The resulting series of reports concluded:

- There are insufficient numbers of certified professionals to fill all the positions and roles that need HIM competencies. Nearly 75 percent of the survey respondents indicated there are not enough qualified applicants to fill open HIM positions in their organization.
- Education was identified as being key to adapting to this changing role—in fact, the report concluded that technology education that improves “understanding of both architecture and application” will be essential.⁴

The findings of the study provided a compelling case for action. In recent years, AHIMA has addressed the work force crisis through a number of strong initiatives focused heavily upon its membership, including advancing an agenda for electronic health information management, creating a virtual educational laboratory to provide state-of-the-art training for students, and developing a framework for education that encompasses the new roles required by the electronic workplace.

AMIA has been a core resource for academic programs in medical and nursing informatics. The field of nursing has developed both an accreditation as well as a certification process. Medicine has not developed a coherent strategy, although this is changing with the recently approved AMIA strategic plan. The strategic plan aims for AMIA to work with others to ensure an expansion of the size and competency of the health informatics work force in the US.⁵ In 2005 the association created the AMIA “10x10” program, which aims to realize the goal of training 10,000 healthcare professionals in applied health and medical informatics by the year 2010. It hopes to improve citizen skills with respect to computer-based personal records through its “Got EHR?” initiative.

Both associations acknowledge that all healthcare stakeholders, including the government, employers, IT vendors, and the employees themselves, must help to address the work force issue if any appreciable improvement is to be noted.



Background

Building the Work Force for Health Information Transformation: A Strategy Summit

In November 2005 AHIMA/FORE and AMIA hosted a summit in Washington, DC, to review and clarify the issues and develop initial strategies to address work force challenges related to EHRs and a nationwide health information infrastructure. A broad representation of industry stakeholders from academia, professional associations, provider organizations, business professionals, and government officials participated.

Experts identified a set of crucial factors for the success of the industry in a time of transition:

- The need to invest in people to use technology wisely and well
- The need for a core of health information specialists who are academically prepared to design, implement, and manage IT systems, including decision support
- The need for clinicians who can competently provide patient care using EHRs and EHR systems

- The need to develop new strategies for recruitment and retention of healthcare employees, particularly health information specialists
- The need for educational curricula and learning environments that fully reflect the electronic environment in which health professionals will practice

The summit participants were asked to develop recommendations to ensure:

- A trained work force specializing in informatics, information technology, and information management
- More broadly, that employees in all areas of healthcare have basic IT skills
- All citizens and patients have the knowledge and skills to use information technology to manage their healthcare.

Such a work force could implement and support health technology tools, including healthcare decision making, and move the industry toward an electronic future.

The result of the summit—a national work force action agenda—is summarized in this report.

The participants developed targeted recommendations that the industry—including employers, employees, vendors, the government, and professional organizations—can use to prepare the existing health work force to use technology tools and to ensure a sufficient number of well-qualified health information specialists to achieve the health IT transformation. The result of the summit—a national work force action agenda—is summarized in this report. Further work will be needed to prioritize and develop a strategic work plan to address some of these suggestions.



Recommendations to the Industry

The group issued these recommendations:

1. Adopt the vision of the Institute of Medicine “Crossing the Quality Chasm” report with its important role of healthcare information technology to improve quality, safety, and cost-effectiveness of care. Use this vision to educate the healthcare industry that information technology is an integral part of healthcare work. Show healthcare employees at all levels and employers what knowledge and skills are needed to practice safely, effectively, and efficiently in an electronic environment.
2. Create incentives to align performance and reward systems in healthcare practice environments to include informatics in professional goals and competencies, and encourage the healthcare work force to see health information competencies and skills as professional and personal goals.
3. Escalate industry-wide advocacy on a collaborative basis regarding the scope and importance of the health information specialist work force and its significance and impact on implementation of the electronic health record and information technologies throughout the continuum of care.
4. Build awareness of the need for additional public and private sector funding to train the healthcare work force to use health information technology. Circulate a message of the importance of funding and facilitating training among employers, associations, vendors, payers, and the government.
5. Engage consumers as key stakeholders in the new healthcare work force by informing the public about the importance of healthcare information technology and how it can improve the quality of healthcare delivery to them.
6. Utilize innovative learning environments with robust health information systems for delivery of continuous education and training to the healthcare information specialist work force at all levels, and ensure access to training through multiple delivery methods including electronic learning formats.
7. Prepare a stronger health information specialist work force for the future through formal education. Ensure faculty competencies in the electronic health information environment. Market health informatics/information management/information technology related careers to young people to increase the number of qualified participants entering the field.
8. Disseminate tools for the healthcare work force through the sharing of information and best practices. Learn from other industries and from each other. Share best practices and understand culture changes from international colleagues who have implemented health information technologies.
9. Prepare the industry for patients who will increasingly manage their own health information and work with consumers and health professionals to educate them about the benefits, risks, and costs of personal health records.



A Work Force Action Agenda

A Work Force Action Agenda

Resolving healthcare work force issues will require action on the part of many stakeholders, including employers, employees, vendors, the government, and professional organizations. In 2002, an AHIMA position statement called upon industry, government, and academic leaders to support the continuing education of health information specialists as they prepare to manage in the electronic environment, to ensure a sufficient number of formal academic and training programs, and to support the continuing education of faculty members.⁶ In a similar fashion, in 2005 AMIA announced its 10x10 Program to create 10,000 applied clinical informaticians by 2010. Based on the summit recommendations, AHIMA and AMIA offer some specific steps for each stakeholder.

The government should:

- Provide federal guidance to support health information technology and training.
- Pass legislation to strengthen programs and increase funding for health information/informatics education programs, student recruitment and retention, and faculty training.
- Through the Centers for Medicare & Medicaid, create an incentive to help cover the cost of training requirements.
- Standardize Department of Labor occupational codes in informatics and information management.
- Fund training programs for applied practitioners in addition to existing training programs for informatics researchers.
- Create a Department of Labor/Department of Education collaborative effort to provide health information specialist training.
- Work with the US government Departments of Labor, Education, and Health and Human Services and professional groups to ensure that the health information specialist is recognized as a distinct skill set and profession, and establish and/or augment career training programs.
- Establish a viable apprentice model for the health information work force similar to that utilized for residency training programs in medicine.

Employers should:

- Strongly encourage staff and employees to include health informatics in their personal goals or competencies as an incentive for increasing knowledge and support this health informatics training.
- Ensure that appropriately educated and trained personnel lead implementations.
- Develop competency-based, cost-effective training strategies that can be used within the work setting and that address cultural issues and overcome fears relating to new technology.
- Create best practice awards and recognition programs for sound health IT training programs.
- Participate in projects to share best practices in health information technology implementation.
- Include funding for health informatics training as part of capital project budgets.
- Consider an incentive to cover personal costs of training and support federally funded allocations for healthcare informatics training and deployment.



A Work Force Action Agenda

Vendors of healthcare information technology products should:

- Advocate for adequate technology training budgets and planning at healthcare organizations.
- Support availability of sufficient, cost-effective training and support tools to healthcare organizations.
- Contribute a portion of dollars from system sales to a national training bank.
- Make healthcare documentation easier to understand so patients can grasp the issues of privacy, security, and identity and understand the greater accountability that health information technology systems offer for security as compared to paper record systems.
- Ensure establishment of interdisciplinary teams to validate and field test systems to ensure effective workflow.
- Support the creation of tools to increase patient health information literacy, such as well-documented Web sites and CD-ROMs of health information that a patient can view and use for referrals.
- Make online personal health record sites user friendly and easy to understand. Help citizens distinguish between personal health records that don't connect through secure Web-based interfaces to their clinical caregivers and those that do.

Members of the healthcare work force (employees) should:

- Adopt or lead the adoption of health information technology tools could be used (or are being used) in their workplace, familiarize themselves with the technologies, and understand changes to work processes.
- Identify gaps in their own knowledge and seek ways to fill them through additional education and/or technology training and embrace lifelong learning.
- Help “demystify” the health information process for their patients. Eliminate barriers to access and unnecessary complexity that confuses consumers.
- Share best practices in health informatics and electronic health record implementation lessons learned with other members of the healthcare community.



A Work Force Action Agenda

To adequately prepare a healthcare work force capable of leading change and working in an electronic environment, academic institutions should:

- Collaborate to ensure standardization of informatics educational competencies are embedded in a variety of relevant curricula.
- Clearly articulate and market the competencies and skill sets for careers in applied clinical informatics, information management, and information technology.
- Encourage schools, colleges, and universities to use IT whenever appropriate in their education and training programs.
- Support faculty professional development in electronic information technologies.
- Build strong partnerships with state and local private sources of funding for information specialist training.
- Support the passage of legislation to strengthen programs and increase funding for health information/informatics education programs, student recruitment and retention, and faculty training.
- Increase the number of professionals who are trained in workflow redesign, care process or quality improvement, EHR implementation, and health information management.
- Reach out to young people with the right critical thinking skills through elementary, junior high, and high school. Participate in middle and high school career days and/or create both Web sites and local youth fairs.
- Implement awareness programs in schools, the media, and hospital patient education programs. To help create a demand for these tools; local celebrities may be useful as spokespersons.

Associations like AHIMA, AMIA, and other groups should:

- Build health informatics training into the continuing education requirements for professional certifications for all health professions.
- Develop a model for a nationwide training program with corporate support.
- Develop an education campaign about the work force issue particularly for healthcare executives and “influencers.”
- Encourage healthcare organizations and their employees to share health information technology implementation how-to strategies, success stories, training practices, and lessons learned.
- Educate junior high and high school students about health information/informatics/technology careers.
- Support a mechanism whereby healthcare organizations to share health information technology implementation including how-to strategies, success stories, training practices, and lessons learned.
- Educate consumers about the benefits, risks, and costs of personal health records.
- Create awareness of the opportunities offered by emerging health information technology in care systems particularly existing and emerging career opportunities.
- Communicate the value of imparting health informatics training for employees to employers.
- Create and use local assessments and projections of work force need to plan for appropriate levels of training.
- Educate federal and state government about the need to address work force issues and advocate for passage of legislation to strengthen programs and increase funding for health information/informatics education programs, student recruitment and retention, faculty training, and education research and standards.
- Help to mitigate health literacy issues, especially those related to health information.
- Understand consumer demand for personal health records and consider how they could be marketed to different consumer segments.
- Develop a plan to help consumers understand the health information technology work force issue and its impact on the delivery of quality care to them.

The participants in the AHIMA/AMIA 2005 work force summit believe the work force issues comprise a crisis that warrants immediate action. Employers, employees, vendors, associations, and the government must take action to ensure the health information specialist work force crisis is addressed. Unfortunately, implementing IT systems into healthcare environments where a well-trained work force is absent can lead one to conclude that these systems cannot work to improve safety, quality, efficiency, and effectiveness. We risk the healthcare industry turning its back on this crucial technology to improve healthcare if we don't properly and quickly address the education and training issues.

AHIMA and AMIA intend to do the following:

- Jointly define a multi-year work force research agenda and seek funding from federal sources and private foundations.
- Convene a joint task force to define basic competencies for those who use EHRs in their daily work.
- Engage informatics and information management education leaders in preparing a vision of the academic resources and network needed for health information education leadership in the US.

- Enlist the support of other key associations in these efforts, such as medical specialty associations, the American Nurses Association, the Healthcare Information and Management Systems Society, the American Hospital Association, the College of Healthcare Information Management Executives, and others.
- Convene a second work force summit in 12 months to assess progress on the work force action agenda.
- Secure a legislative solution to address work force development and retraining shortfalls.
- Broadly publicize these recommendations to those whose support is needed to move the action agenda.

Working together, the industry can train existing health information specialists and clinicians who use information technology, recruit new ones, improve healthcare information technology education, and make the goal of a truly 21st century healthcare system a reality. Accomplishing these tasks is both our challenge and our opportunity.



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The American Health Information Management Association (AHIMA) is the premier association of health information management (HIM) professionals. AHIMA's 50,000 members are dedicated to the effective management of personal health information needed to deliver quality healthcare to the public. Founded in 1928 to improve the quality of medical records, AHIMA is committed to advancing the HIM profession in an increasingly electronic and global environment through leadership in advocacy, education, certification, and lifelong learning. To learn more, go to www.ahima.org.



The American Medical Informatics Association (AMIA) is the premier organization in the United States dedicated to the development and application of medical informatics in the support of patient care, teaching, research, and healthcare administration. AMIA links developers and users of health information technology, creating an environment that fosters advances that revolutionize healthcare. To learn more, go to www.amia.org.



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