



# **Scenarios and Solutions for the Future of Transcription**

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The American Association for Medical Transcription is the world's largest association for medical transcription. The mission of AAMT is to lead the evolution of medical transcription and represent and advance the profession and its practitioners. For more information about AAMT, visit [www.aamt.org](http://www.aamt.org).

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. For information about AHIMA, visit [www.ahima.org](http://www.ahima.org).

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## **Executive Summary**

In the past, new technologies have worked to better enable the process of medical transcription as an intermediary service in the creation of healthcare documentation. However, the current emphasis on adoption of electronic health records and rapid technological innovation is dramatically changing the methods by which documentation can be created.

Medical transcription is one of the applied domains in the management of health information that is facing dramatic transformation. Forces such as the government's national health information infrastructure initiative, the implementation of the electronic health record, technology innovations, emphasis on lower costs and higher productivity, and concerns for quality care and patient safety will all have an impact on changing the practice of medical transcription. Evaluating these forces and developing strategies to address them will help the healthcare industry at large and the profession in particular prepare to meet these future changes.

Given the intensity and pace of this change, the boards of directors of the American Health Information Management Association (AHIMA) and the American Association for Medical Transcription (AAMT) felt that it was urgent to fully understand these impacts, take stock of likely future scenarios of the profession, and initiate a call to action to position this work force for the future.

In 2004, AAMT's and AHIMA's boards of directors appointed a panel of nationally recognized experts to form the Transcription Futures Group to study the convergence of forces that will likely impact the role of medical transcription in the next decade.

In late 2004, the group met to examine the convergence of various internal and external environmental forces on transcription functions. The group also developed likely future scenarios that would affect the domain of transcription practice and identified actions that should be taken by the profession and its members to achieve optimal positioning in light of the likely futures.

To complete its task, the group used traditional scenario planning techniques to brainstorm beyond current frames of reference and to identify initial themes that would be used as a foundation for the development of likely futures. The group looked at how five various environmental factors might converge to create scenarios. The factors included:

- Development of enabling technologies
- Evolution and convergence of health information roles
- Regulatory changes that impact practice
- Emerging health information needs for consumers and providers
- Increasing demands of the information economy within the electronic health environment

The group developed four likely scenarios that offer perspectives on the possible futures of transcription. The possible scenarios are:

- Rapid adoption of technology within a standards/quality framework that supports the electronic health record concept and information needs of all stakeholders
- Rapid development and adoption of technology without focus on the information needs of all stakeholders and outside of a standards/quality framework
- Technology lag but increased information and quality demand

- The status quo with incremental change and movement toward an electronic health record environment

The group also identified a set of actions for optimal positioning of the profession and its members. “Optimal positioning” is defined as a set of actions that will leave the profession and the association in a relatively good place regardless of which of the future scenarios actually proves true. These recommendations build a framework for actions that AAMT and AHIMA can pursue with the industry over the next several years. Progress in these areas will serve to create a future that benefits the industry, both associations, and medical transcriptionists.

The recommendations are:

1. **Define a continuum of core competencies** that enable medical transcriptionists to provide faster and more direct capture and presentation of information to the healthcare provider and expand their role in ensuring the quality, completeness, and accuracy of digitized clinical information.
2. **Communicate the extent, impact, and urgency** of the required changes in data capture and document creation methods and technologies to the industry. Describe these changes to medical transcriptionists in a way that empowers them to participate rather than resist.
3. **Develop training opportunities** that engage medical transcription and health information management professionals in leading the change to more streamlined, efficient data capture and text/document management.
4. **Research best practices** in data capture and document/text management. Promulgate that research into easily transferable strategies that are replicated throughout the industry.
5. **Create and promulgate standards** in data capture, presentation, and document/text management that advance patient safety and the quality of healthcare. Initiate alliances with clinician associations and others to ensure these standards are transferred to practice.
6. **Advance models for rapid technology adoption** that document return on investment and improved data quality.

This report illustrates a new trajectory for the practice of medical transcription with a new emphasis on data quality control and management, no matter which future scenario develops. To make a successful transition, the transcription and health information management industries must be proactive in building alliances, setting technology agendas, creating information standards, training and retraining, and conducting research.

## **Scenarios and Solutions for the Future of Transcription**

Medical documentation and care of the sick are inexorably intertwined. Ancient cave writings, hieroglyphs on temple walls, and papyrus rolls all attest that even in the earliest of times documentation was important in the delivery of medical care. While the documentation medium has changed from clay tablets to parchment to paper and now to electronic files, the reasons for documenting have always been the same: to record an individual's healthcare over time and to assist in the support of research and education for the advancement and achievements in medical science.

This evolution of the profession was the result of the convergence of enabling technologies. Until the 20th century, physicians served as both providers of medical care and the sole scribes of medical documentation. After 1900, when standardization of medical data became critical to research and a requirement for hospital accreditation, medical stenographers began to replace physicians as scribes for specialty reports, taking their dictation in shorthand. With the introduction of dictating equipment at the turn of the 20th century, it became unnecessary for physicians and scribes to work face to face. The refinement of the typewriter into a commercial product at about the same time provided a useful transcription tool for recording physician dictation. The convergence of these technology advances with the willingness of physicians to rely on the judgment and reasoning of "medical transcribers" to safeguard the accuracy and integrity of medical dictation made the development of the medical transcription profession as we know it today possible.

The medical transcription industry has grown into an impressive profession. The Bureau of Labor Statistics (BLS) reports that medical transcriptionists held about 101,000 jobs in 2002. About four out of 10 worked in hospitals and another three out of 10 worked in offices of physicians while others worked for business support services, offices of other health practitioners, medical and diagnostic laboratories, outpatient care centers, and home healthcare services. According to the BLS, job opportunities will be good and are projected to grow faster than average through 2012. An aging population contributing to an increased number of healthcare visits, combined with a continued emphasis on accessible electronic documentation, is anticipated to stimulate the need for medical transcriptionists. In other words, increasing numbers of medical transcriptionists will be needed to amend patients' records, edit for grammar, and identify discrepancies in electronic records.<sup>1</sup>

Over time, advancements in medical transcription have incorporated the use of dictation- and transcription-enabling technologies. Workflow efficiencies and productivity gains have increased in order to meet the needs of a growing information economy. While the tools used by medical transcriptionists have dramatically changed from wax cylinders to digital dictation devices and from manual typewriters to computers, the fundamental nature of the practice has not. The BLS reports that in spite of the advances in speech recognition technology, it has been difficult for software to grasp and analyze the human voice and the English language in all its diversity. As a result, there will continue to be a need for skilled medical transcriptionists to identify and appropriately edit the inevitable errors created by speech recognition systems and to create a final document.<sup>2</sup>

While new technologies have continued to enable the work of the medical transcriptionist, the common theme across industries is that "innovation has always had the direct effect of creating new businesses and industries and the indirect effect of

destroying many of the jobs in the existing industries that they eclipsed.”<sup>3</sup> While the evolution of technology previously has enabled the work of the medical transcriptionist, the critical question is how these evolving technologies will treat the practice of medical transcription in the future.

As we begin the 21st century, we see changes in outside forces that are impacting the profession. The way transcription services are delivered and off-shoring trends will have a major effect on the profession. The evolution of the electronic health record (EHR) will change documentation processes and habits. Standardization of terminologies and documentation requirements will be supported by structured text and interactive direct entry by clinicians. Documentation will be enhanced through interactive knowledge-based decision support tools and dialogs. And government and other stakeholders will continue to push for efficiencies, better quality, more productivity, and enhanced timeliness, which traditional medical transcription work processes are unable to fulfill. In addition, strong efforts to create a health information infrastructure are under way to support the effective and efficient use of these new technologies. These forces, when pooled, are likely to position clinicians once again as direct scribes of the individual’s healthcare record, while at the same time drastically diminishing the need for an intermediary medical transcriptionist. Therefore, it has never been more important to advance our understanding of the impact of this convergence and to issue a call to the health information management (HIM) and transcription professions to create their futures.

## **The Big Questions**

The American Health Information Management Association’s (AHIMA) and the American Association for Medical Transcription’s (AAMT) boards of directors initiated an expert panel to address the impact of the convergence of several primary forces on the domain of medical transcription practice and to generate a call to action that ensures optimal positioning of the profession and its members for the future.

A group of 14 experts in health information practice, medical transcription and dictation, software development and deployment, and information standards was convened in November 2004. Its members studied the following principal forces:

- Development of enabling technologies
- Evolution and convergence of health information roles
- Regulatory changes that impact practice
- Emerging health information needs for consumers and providers
- Increasing demands of the information economy within the electronic health environment

Each of these forces independently has specific significant impact on medical transcription practice. However, taken together, the convergence of these forces will be greater than the sum of its parts. The Transcription Futures Group studied the union of these forces and their associated impacts.

Specifically, the group was charged with addressing the following questions:

- **What is the projected global picture** within the domain of transcription practice in the next decade and beyond in light of the development of enabling technologies, evolution and convergence of health information roles, regulatory changes that impact practice, emerging health information needs for consumers and providers, and the increasing demands of the information economy within the electronic health environment?

- **How will the need for real-time healthcare data** be handled in a regulatory environment that requires greater privacy and security measures?
- **Will demand for transcription increase or decrease** during the next decade and beyond? Will the demand for alternative data capture methods increase or decrease during the next decade and beyond? What will be the intrinsic nature of these demands?
- **Will emerging technologies change the processes** of dictation, data capture, use, and distribution of transcribed data? What will be the intrinsic nature of these changes?
- **How will current knowledge workers be impacted** by the convergence of these forces (including clinicians, health information managers, information technology experts, transcription professionals, and others)?
- **How will these forces impact traditional transcription practice?** What strategies should be developed to address them as a first step for ensuring that the competencies and skills required of future transcriptionists are identified?
- As a result of these changes, **what recommendations does the group have for continuing education** of current transcription professionals and for development of entry-level educational programs for future transcription professionals?
- What **leadership direction** should the AAMT and AHIMA assume in relation to the projected impacts of these forces on transcription practice?

## Methodology

The scenario planning process was used to study the convergence of the five identified forces that would likely impact the domain of medical transcription practice. The steps of the process included:

- Reviewing and confirming the key questions
- Setting the time and scope of the analysis
- Mapping basic trends and driving forces
- Determining major stakeholders
- Identifying key uncertainties and their linkage to each other
- Constructing futures scenarios
- Evaluating the scenarios and proposing a set of actions for optimal position of the profession and its members

### *Confirmation of Key Questions and Time Scope*

The group's first task was to confirm the key questions. The group confirmed that the key questions assumed significant changes within a complex, uncertain environment and addressed real issues confronting the domain of practice and the professional organizations. The group set a 10-year time frame as a realistic period for futures projection. The opinion was that maturation of technologies, coupled with the demands of the information economy, would significantly impact the domain of medical transcription practice.

### *Trends, Drivers, and Stakeholders*

Trends and drivers for the next 10 years vis-à-vis the five driving forces were identified. The group was divided into five subgroups with each assigned to identify trends, drivers and stakeholders for one of the driving forces: enabling technologies, evolution and convergence of HIM roles, regulatory changes, consumer and provider health information needs, and demands of the information economy.

Each subgroup reported their preliminary list for deliberation and consensus by the entire group, resulting in the identification of major trends and drivers as noted below.

### **Driving Force: Enabling Technologies**

#### *Trends and Drivers*

Capture, storage, and delivery

- Front- and back-end speech recognition
- Handwriting recognition
- Natural language processing
- Reduced costs for technology (i.e., data storage)
- Improvements in voice capture technology and compression ratio
- Optical scanning
- Structured text capture through templates

Security

- Digital authentication
- Encryption
- Biometrics

Decision support

- Computer-assisted diagnosis
- Artificial intelligence

Connectivity

- Internet and connectivity
- Mobile devices

Standards

- Language
- Terminology and formats

### **Evolution and Convergence in Health Information Roles**

#### *Trends and Drivers*

- Continued need for health information management workers
- Managing narrative record content continues to be important
- Increase in structured content
- Increased focus on data quality
- Increased need for health information workers
- Need for new, techno-savvy data capture specialists
- Decreased need for traditional medical transcription
- Medical transcription will include a range of competencies

### **Regulatory Changes**

#### *Trends and Drivers*

- Increased emphasis on privacy and security—HIPAA and beyond, population health, identity
- Outsourcing—offshoring, independent contractor versus employee
- Medical-legal changes including tort reform, authentication, moral/ethical
- Credentialing—traditional knowledge/emerging coordinating roles
- Standards in reimbursement—national electronic health initiative, Joint Commission, pay for performance
- Consumer care—access and ownership
- Regional health data exchange

### **Health Information Needs of Consumers and Providers**

#### *Trends and Drivers*

- Change in role of physician as leader
- Mobility/portability

- Electronic culture
- Human interoperability
- Healthcare team
- Technologies for proficiency
- Information capture out of normal workflow
- Consumable product, customization
- Security
- Cost efficiency
- Information as a driver of safe healthcare
- Patient as active participant
- Accountability
- Quality monitoring
- Velocity of information need

### **Demands of the Information Economy**

#### *Trends and Drivers*

- Increased technology to support informed decision making to minimize risk
- The more the stakeholders know they can obtain information, the more information they want
- A vortex forms where increased technology and increased information needs feed off and drive each other

#### *Stakeholders*

Stakeholders identified include:

- Medical transcriptionists, employers, clinicians, legal professionals, providers, vendors, information technologists, consumers/patients, facilities/payers, suppliers, agencies, professional associations, educational institutions, patient advocates

#### *Key Uncertainties*

Important trends that are relatively predictable can be included in any future scenarios. However, any scenario should be based on important or key trends that are uncertain. After reviewing the trends and drivers for each of the five primary forces, the group identified what they believed to be the most uncertain of these for each force.

### **Key Uncertainties**

#### Enabling Technologies

- Real-time front-end speech recognition
- Migration rate of the electronic health record
- Handwriting recognition

#### Convergence of HIM Roles

- Health information management roles movement toward IT
- Increased demand for data quality
- Decreased need for traditional medical transcription
- Need for supply for medical transcriptionists

#### Regulatory Changes

- Implementation of standards (i.e., national electronic health record initiative, pay for performance)
- Content requirements of the health record
- Offshoring
- Issues regarding consumer care such as access, ownership, quality
- Credentialing of traditional and emerging coordinating roles

#### Health Information Needs of Consumers and Providers

- Quality and completeness monitoring
- Trend in human interoperability

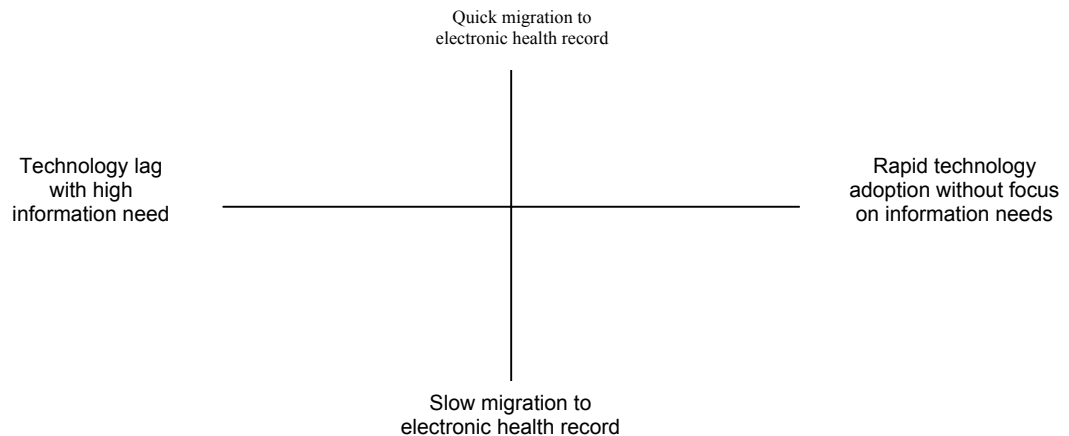
- Information capture as part of normal workflow
- Demands of Information Economy
- Balance between information needs and technology development

### *Preliminary Scenarios*

The second task was to define the themes of the future scenarios using the identified trends and associated drivers and uncertainties. The extremes of all possible uncertainties across the primary forces were identified and the following scenarios emerged (with associated titles):

- **Faster than a Speeding Bullet:** Rapid adoption of technology within a standards/quality framework that supports the electronic health record concept and information needs of all stakeholders
- **Able to Leap Tall Buildings in a Single Bound:** Rapid development and adoption of technology without focus on the information needs of all stakeholders and outside a standards/quality framework
- **More Powerful than a Locomotive:** Technology lag but increased information and quality demand
- **The Effects of Kryptonite:** Status quo with incremental change and movement to electronic health record environment

The scenarios can be mapped on an *x-y* axis with the extremes of key uncertainties identified:



### *Scenario Development*

With the initial themes of each scenario fleshed out, members divided into four groups, each assigned with the task of developing one scenario. Each scenario was presented to the entire group for review and assessment and consensus. The appendix includes the completed scenario narratives.

### *Optimal Positioning*

Finally, the group assessed the scenarios to determine actions that would optimally position the professional organizations and their members by the year 2015. "Optimal positioning" consists of identifying a set of actions that will leave the profession and the associations in a relatively good place, regardless of which of the four scenarios actually proves true. These scenarios will be published to elucidate the major trends identified for

the five primary external forces and to further stimulate readiness for change and discussion of actions needed to achieve optimal positioning for the profession.

A modified Delphi technique was used to consider actions for optimal positioning. Each member was asked to identify three key actions that must be taken to optimally position the associations and their members. The key actions of each member were clustered into the following categories:

- Technology
- Advocacy/Alliances
- Research
- Change management
- Information/Technology standards
- Workflow
- Training
- Credentialing

Each action was placed in an appropriate category, resulting in a set of a unique action items. Participants then individually selected the four most important actions to take for optimal positioning. The following table lists the action categories, their associated action, the number of times each action item was selected by participants as being important, and the total number of times an action item within a category was selected as important.

#### Action Category Items

Category	Action Item	Times Selected as Important
<b>Technology</b>	Take a proactive role in setting technology agendas, including technology development and testing	4
		(Total: 4)
<b>Advocacy /Alliances</b>	Develop alliances with patient safety and consumer advocacy groups to encourage consumer role	0
		2
	Take leadership role in developing consensus on content standards	0
	Lobby for policy change and role definition	2
	Engage in marketplace (i.e., providers/clinicians) education regarding need for new health information professional in healthcare documentation	5
	<b>Continue to link value of technology and information in the overlap areas of quality</b>	1
	Create value for quality resulting in data integrity standards	0
	Create incentives to move forward with electronic health record	(Total: 10)
<b>Research</b>	Gather/provide industry survey information and case studies that demonstrate value of multiple documentation methods	4
		0
		2
		2
		2
	Interplay with technology to uncover attributes that increase overall production and understanding of skill relations to emerging technologies	2
	Create a new practice model and work to implement this in multiple practice settings	2
	Develop the business case for speech recognition and quality/productive indicators	2

	<b>Research and develop best practices in processes all around transcription</b>	5 (Total: 13)
<b>Change management</b>	Position the medical transcriptionist (MT) as an IS professional and integral healthcare provider	3
	Inform and educate MTs regarding environment changes in their world	0 (Total: 3)
<b>Standards</b>	Promote/create standardization in document format and content	1
	<b>Active focus on standards creation rather than reaction</b>	10
	Establish a technology forum for true interoperability standards among vendors	1
	Involvement with standard setting and quality measures	1
	Expand style guide with standardization efforts	1 (Total: 14)
<b>Workflow</b>	Promote workflow processes for using new technologies	2 (Total: 2)
<b>Training of MTs</b>	<b>Train for data abstracting role/skill for MTs</b>	8
	Increase access to analytical education to broaden scope and role of MT	1
	Broaden MT education to enhance the data quality function	2
	Inform and educate MT programs regarding technology changes in environment	1
	Increase technology training and awareness of MTs	1 (Total: 13)
<b>Training of others</b>	<b>Position both associations as consultants to train physicians and other healthcare providers to improve input quality and input content and structure</b>	8 (Total: 8)
<b>Credential management</b>	Use professional credentials to improve real and perceived value	0
	Increase level of education to implement minimum standards leading to certification	0
	Certify knowledge level	0 (Total: 0)

## Major Insights

The convergence of the five primary forces offers many challenges and opportunities for the domain of medical transcription practice. Analysis of the action categories and items shows that optimal positioning of the profession within the next decade is more likely to occur as a result of a stronger leadership role on the part of the professional associations than by the actions of individual members of the profession itself.

The future scenarios in Appendix A describe how these major forces may converge and impact the medical transcription professional and professional associations. In the scenario dominated by rapid technology change that is accompanied by better technology infrastructure and development of an electronic health record (“Faster than a Speeding Bullet”), forward-thinking organizations anticipate technological breakthroughs and accordingly re-engineer to capitalize on its advances. Success in optimal positioning of the medical transcription domain and professional organizations includes shaping and staking their position as a valuable partner in healthcare delivery.

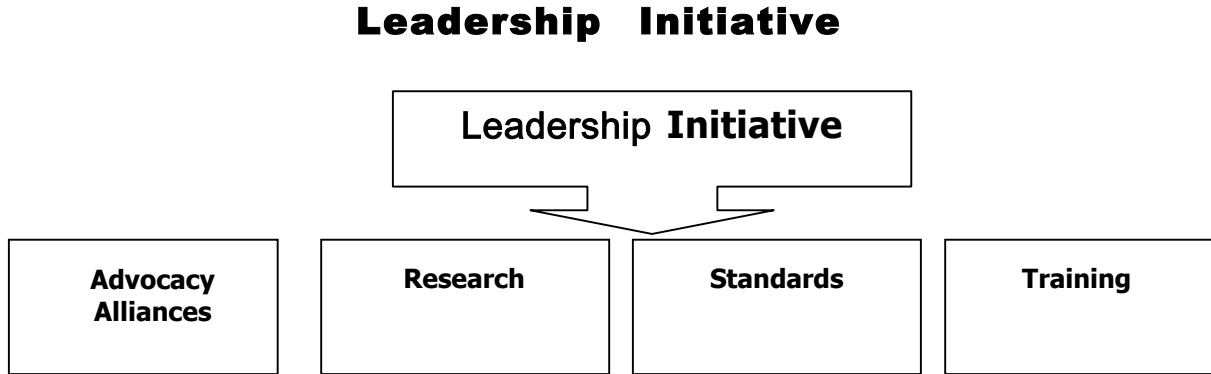
Where technology is the driver (“Leaping Tall Buildings in a Single Bound”), industry, financial, consumer, and professional interests will ultimately clash over the cost and lost opportunities of technology adoption without standardization. Without directed leadership, health information professionals will be left behind as others take advantage of a crisis situation and move forward. For all parties, hindsight will reveal that misplaced and misordered priorities were costly mistakes.

In the scenario dominated by technology lag but with increased information demand and domination for a quality consumable (“More Powerful than a Locomotive”), opportunities for specialized roles in data quality and management emerge. On the outside will be insular organizations and members who cling to inefficient practices and who have not developed methods for data and knowledge management. Distinctly on the outside, too, will be professions that have not transformed themselves and are overly vested in old conceptual frames of reference.

In a future controlled by inertia (“The Effects of Kryptonite”), incremental movement toward the electronic health record does not force a data quality revolution. Pressure for lower costs increases the need for more work output, but at less pay; basic acceptable work becomes the quality standard. With no particular drivers, the credential remains voluntary. As incremental change occurs, decreases in the work force may take place. Status quo environment notwithstanding, there are leadership opportunities for moving the professional status of the domain to a higher level. Those who can provide solutions to the cost/productivity dilemma will be on the winning side.

The four scenarios foretell that the professional associations and their members run a grave risk if they do not assume a leadership role in four key areas. A major insight from the work of the Transcription Futures Group is a leadership model that, if implemented, will leave both professional organizations and their members in a good position no matter which future scenario proves to be true. The merging of the five primary forces is producing a unique leadership opportunity and is the driving force in critical initiatives that must be accomplished if the profession and its members are to carve out a sustaining role in a transforming world. The figure “Leadership Initiative” shows the new leadership initiative model. The model encompasses four leadership initiatives: advocacy/alliance building, developing and implementing a research agenda, proactive focus on standards development, and training for new job opportunities. Given the nature of the complex

futures environment, many of these initiatives are related. A comprehensive leadership approach will be essential to meet any prospective future.



#### *Advocacy and Alliances*

Regardless of which future scenario plays out, the pressure of consumable, quality information output will ultimately drive electronic health record development. Regardless of slow or fast migration to the EHR, growth will come through and cause change in the domain of medical transcription practice. Economist Joseph Schumpeter coined the phrase "creative destruction" to describe the process of industrial transformation that accompanies radical innovation. As with other professions and jobs throughout history, the field of medical transcription may likely be subject to creative destruction and replaced by an emerging occupation. The profession must be proactive if it is to take ownership of the up-and-coming new occupation. To make the value case for linking technology and the critical process of data quality management in producing a consumable information product, it will be important to be a player at the highest and most visible levels. AAMT and AHIMA must increase their volunteer efforts, educate and prepare their constituents for future practice scenarios, and aggressively pursue this major area of new practice.

#### *Research*

One mark of a profession is the contribution that it makes to the body of knowledge within its domain of practice. The profession that engages in research is served well by the byproducts of the information it produces. Those who are leaders in producing consumable research for use by all stakeholders are viewed as experts and leaders within the domain. Such positioning and the access to the research data itself allow an organization to actively shape its future. To be viewed as leaders, AAMT and AHIMA must develop and implement a strategic research program that can serve itself, its members, and other stakeholders well. Creating practice models and best practices for emerging occupations positions the organizations and their members to lay ownership claim to them. Providing unbiased data for making the business case for current or new technologies and processes elevates the organizations to an enviable leadership position.

#### *Standards*

Participation in standards development, like the research initiative, positions the profession as an expert in the field. An active focus on the creation of standards gives the profession a degree of control over the future and the advantage of being more informed and better aware about that future. These advantages provide opportunities for

incorporation of the future in strategic and tactical plans and help the organization to flourish. Professions and organizations that react instead of creating standards and regulations will likely find themselves the victims of creative destruction. Pressures for standards development are included as certainties within each scenario. The uncertainty is what form these may take and how fast they will develop. AAMT and AHIMA must forcefully pursue decision-making positions within the standards community.

### *Training and Retraining*

No matter which future scenario plays out, the medical transcription professional, AAMT, and AHIMA must acknowledge that the medical transcription role is already changing and will continue to do so, perhaps at an accelerated pace. The redefinition of the role, like many others in the wider practice of HIM, is moving on a data quality trajectory with new types of technology supporting the documentation task. It is imperative that medical transcription professionals identify and carve out their unique contributions to this area if they are to maintain and create new value in the marketplace.

Today's intermediary position of scribe will likely be the victim of creative destruction. As the intermediary position diminishes, it grows new opportunities for consulting and training physicians and other direct healthcare providers in improving input quality and content and structure of documentation. The training initiative is closely related to the advocacy and research initiatives. A comprehensive training initiative depends on the synergistic relationship among all three initiatives.

## **Recommendations**

Six recommendations have been formed from the work of the Transcription Futures Work Group. These recommendations build a framework for actions that AAMT and AHIMA can pursue with the industry over the next several years. Progress in these areas will serve to create a future that benefits the industry, the associations, and medical transcriptionists.

- **Define a continuum of core competencies** that enable medical transcriptionists to provide faster and more direct capture and presentation of information to the healthcare provider and expand their role in ensuring the quality, completeness, and accuracy of digitized clinical information.
- **Communicate the extent, impact, and urgency** of the required changes in data capture and document creation methods and technologies to the industry. Describe these changes to medical transcriptionists in a way that empowers them to participate rather than resist.
- **Develop training opportunities** that engage medical transcription and health information management professionals in leading the change to more streamlined, efficient data capture and text/document management.
- **Research best practices** in data capture and document/text management. Promulgate that research into easily transferable strategies that are replicated throughout the industry.
- **Create and promulgate standards** in data capture, presentation, and document/text management that advance patient safety and the quality of healthcare. Initiate alliances with clinician associations and others to ensure these standards are transferred to practice.
- **Advance models for rapid technology adoption** that document return on investment and improved data quality.

These recommendations, along with specific individual and joint actions that AAMT and AHIMA can pursue with the industry over the next several years, will serve to create a future that benefits the industry, both associations, and medical transcriptionists.

*Notes*

1. Bureau of Labor Statistics, US Department of Labor. "Medical Transcriptionists." *Occupational Outlook Handbook, 2004-05 Edition*. Available at [www.bls.gov/oco/ocos271.htm](http://www.bls.gov/oco/ocos271.htm).
2. Ibid.
3. "The Churn. The Paradox of Progress." Federal Reserve Bank of Dallas. Reprint from 1992 annual report.

## **Appendix: Future Scenarios**

### ***Faster than a Speeding Bullet***

*Rapid adoption of technology within a standards/quality framework that supports the electronic health record concept and information needs of all stakeholders*

Just a little over 20 years since the publication of the National Library of Medicine's report *The Computer-Based Patient Record: An Essential Technology for Health Care*, the vision is reality. By the dawn of 2015 the futurists were proved right. Once regulations and standards promoting consistency, quality, accessibility, and portability connected with technology breakthroughs, development of the electronic health record (EHR) moved faster than a speeding bullet. Standardization of language and terminology formats has guided maximization of speech and structured-text data capture technologies that have made the EHR concept reality. New roles for most stakeholders have emerged. Incorporated into their workflow, enabling data technologies are skillfully used by clinicians making them once again primary scribes and eliminating the need for and use of intermediaries to create and access information for them in the global EHR.

Demands by all stakeholders for a consumable quality healthcare data product drives healthcare and healthcare information processing standards. The explosion of commercial information devices and Internet incursion into daily life has engaged consumers as never before in new roles. Consumer activism and advocacy has increased access to and interaction with the global EHR, and consumers are playing a more informed role in healthcare decision making.

Clinicians and consumers are not the only ones who benefit from EHR development. Thanks to the mesh of standards with technology, healthcare entities are efficiently run, cost-effective businesses with customer-focused initiatives and processes. Payers are also effective and timely in reimbursement data processing resulting from access to and interaction with the global EHR.

Among the biggest winners are health information professionals who had their eye on the bullet, correctly anticipating its trajectory. The enabling technologies that spurred EHR development have all but eliminated thousands of jobs related to the medical transcription industry. Understanding that new ideas, new products, and new technologies upset the status quo and reshuffle jobs, these professionals prepared to move into new roles that didn't exist a few years earlier.

Realizing that EHR growth would cause irreversible industry change and kill traditional jobs, the professional associations undertook an aggressive advocacy, research, and training campaign 10 years earlier. Rather than react to change, they made themselves central to it by actively focusing on standards creation, research, and development of best practices in data quality processes. Those medical transcriptionists, eager not to fall victim to job loss, applied their core knowledge and eagerly trained for new roles as final arbitrators of EHR data quality and completeness. These combined actions allowed the professional associations and those transcriptionists savvy enough to ride the bullet to position themselves as integral to healthcare providers and leaders in data quality management in the EHR world.

### ***Able to Leap Tall Buildings in a Single Bound***

*Rapid development and adoption of technology without focus on the information needs of all stakeholders and outside a standards/quality framework*

At the dawn of the second decade of the 21st century, burgeoning information systems and communications innovation has moved into every facet of modern life. The good news is that five years later, stakeholder-increased healthcare information needs are driving rapid technology adoption. Consumers are demanding quality healthcare based upon quality data; physicians are given appropriate incentives to use information technology tools, and access to quality data is needed to streamline practices.

The bad news is that, unfettered by mandated uniform data sets, technology adoption outside of regulatory standards, a national infrastructure and a data quality framework is out of control. Like Superman, technology can leap tall buildings in a single bound, but unlike Superman, the consequences are unmanageable. The curse of undisciplined adoption is the collapse of existing infrastructure, multiple standards and formats, information overload, and hopeless data extraction.

Stakeholders find themselves between the La Brea tar pits and Valhalla on the technology adoption curve. For those organizations able to create incremental value worthy of effective corporate change, technology adoption has proved positive. These organizations have imposed their own adherence to guidelines, cooperated in standardization of data elements, and developed a more comprehensive view across the continuum. For others, however, the situation is bleak.

Drawn in many different directions, health information professionals, in particular, are caught in the vortex. Work force shakeout has left many in the tar pits of traditional medical transcription/dictation work. A new, informed work force is taking over new opportunities for data management work in Valhalla, leaving the traditionalists behind. Staking out their claim early and possessing the right mix of education and skills, these new recruits are appropriating the Valhalla job opportunities. Once the standards lag catches up with technology adoption, the new work force is entrenched, leaving no room for thousands of traditionalists.

Those in the medical transcription profession would have been better positioned had they realized the futility of saving traditional jobs in a period of creative churn. Had they recognized the unity between information systems and information management and clarified their value and roles in an EHR environment earlier, medical transcriptionists would have found themselves in a better position to move into new and sustainable job opportunities. Aggressive action in standards development, research, education, and advocacy by the professional organizations would have propelled the profession to a leadership position and stopped new entrants in usurping jobs created by technological innovation.

### ***More Powerful than a Locomotive***

*Technology lag but increased information and quality demand*

Ten years have passed since the secretary of Health and Human Services appointed the national coordinator for health information technology. While the technology breakthrough that would propel EHR development has not materialized, demands for consumer-centric, information-rich, quality healthcare has taken off like a locomotive. Payment incentives, physician compensation competition, personal health records, disease management, and tort reform are principal drivers for a quality consumable information product.

While technology has lagged, components for facilitation of quality information have been put in place. Standards to facilitate electronic prescribing are in place by the Centers for

Medicare and Medicaid Services, and the Medicare beneficiary portal provides consumer access to personal and customized health information. The Consolidated Health Informatics initiative has endorsed 20 sets of standards to make it easier for information to be shared across agencies and to serve as a model for the private sector. Development of content and format standards has been steady and structured input has gradually increased. These developments, together with the “commoditization” of skill sets and increased off-shoring of jobs, are threatening the domestic medical transcription industry.

Quality information, however, is equated with quality healthcare. Work redesign incorporates embedding traditional methods for quality control. While traditional medical transcription jobs are off-shored and direct entry documentation increases, new job opportunities are created in data quality management. For those who can determine data quality requirements, develop data tracking and monitoring systems, and improve processes that use and create data, the world is their oyster. Seeing the locomotive at the platform, the winners in this future got on the train before it left the station.

### ***The Effects of Kryptonite***

*Status quo with incremental change and movement to electronic health record environment*

Lassitude and inertia are still symptoms that dominate the electronic health information world in 2015. Torn by other priorities, government has failed to implement a national health information technology infrastructure. Like red kryptonite, lack of data exchange and documentation standards creates unpredictable interoperability and data exchange. Information technology tools are not sufficiently enabling and transparent for workflow incorporation. Despite the desire for increased quality driven by the value of data, movement toward consumer-centric systems is not realized.

The desire for a low-cost work force drives off-shoring. As volume swells, there is greater pressure for output. More productivity for less pay characterizes the workplace. Basic acceptable work becomes the quality standard for health information. Like kryptonite, these trends and the slow but continuous growth toward real-time speech and handwriting recognition technologies prove toxic, resulting in destruction of traditional domestic medical transcriptionist roles.

In this future, those who know the consequences of kryptonite and take action against its effects are in a good spot. Positioning themselves as part of the value chain, these individuals become part of the solution. Proactive and taking on leadership roles, the kryptonite-informed profession becomes synonymous with standards development and making the return on investment case for quality data. Through education and training they are able to recycle their transcription proficiency into a suite of techno-savvy data management skills, successfully avoiding the fallout of kryptonite. For the less informed and action-oriented, however, kryptonite effects permanently rob them of the capability for moving into the new value chain.