

## AMIA's realigned strategic plan



It is an honor to serve as the Chair of the Board of Directors of such a vibrant and member-focused organization.

Before beginning my term as chair, I met with the AMIA staff. One of the questions I was asked was "What is your vision for AMIA and what do you want your legacy to be?" As I learned during my 1-year term as chair-elect, it is nearly impossible for one person to understand the sheer volume and depth of our programs and activities. AMIA's board, committees, working groups and individual volunteers have accomplished an incredible amount in the past 20 years. As I thought about that fateful question, I looked at our extensive strategic plan and began to talk to hundreds of you about AMIA. I thank each one of you for your dedication to AMIA. You are the reason that we launched new approaches to branding and messaging, an updated logo, and a realigned strategic plan. We are collectively—*Informatics Professionals. Leading the Way.*

In 2010 the AMIA Board of Directors decided that it was time to re-evaluate AMIA's strategic plan and overall objectives. This report summarizes the realignment, including: Process, Mission, Planning Assumptions, Domains, and Pillars with goals and objectives.

### PROCESS OVERVIEW

Prior to beginning the strategic realignment process, it was important to listen to AMIA members. A request was submitted to members, committees, and working groups to participate and provide input. The board and staff were asked to comment. And at the 2009 Annual Symposium, we collected comments and asked participants what issues AMIA needed to address and what we needed for the future.

The call for information from members resulted in more than 30 pages of raw-data field notes. Using the Grounded Theory approach, the data were turned into key concept areas. The original key concept areas that evolved focused around (1) strategy and finance (2) members (3) sharing our knowledge and (4) leadership.

With these data in hand, the board held two retreats (March in Atlanta and May in Phoenix). The executive committee met in September 2010 and reviewed components of the strategic realignment supported by the AMIA staff. Countless iterations of this material

The purpose of the *Messages from AMIA* section is for AMIA to communicate and involve its current and potential members in AMIA. The messages on these pages reflect the goals and direction of AMIA's board of directors and leaders only. These pages are designed to inspire members and readers to connect with the association on strategic objectives and activities. We hope you will find them a useful tool for keeping connected to AMIA leadership. We welcome your thoughts and feedback.

were shared with the board for comment and refinement and we are excited to share this report, which contains the organizational goals and selected objectives, with our members.

### MISSION

AMIA and its members aim to transform healthcare through trusted science, education, and practice in biomedical and health informatics.

### ASSUMPTIONS FOR PLANNING

In order to make progress toward an envisioned future, we needed to anticipate the strategic factors that are likely to affect our ability to succeed, and to assess the implications of these factors. The outcome-oriented goals that formed the basis of this plan are based on the following assumptions:

#### Informatics

- ▶ Informatics will continue to be a rapidly evolving scientific field.
- ▶ Informatics is an important discipline and a supporting technology to other aspects of biomedicine.
- ▶ Informatics is an interdisciplinary, inclusive, and collaborative discipline.
- ▶ The need for informatics will continue to grow.
- ▶ There is a huge opportunity from increasing complexity in the health sector. Some of this complexity comes from an increasing volume of information, increasing networks, - increasing information channels, increasing velocity of data, etc.

#### Climate

- ▶ Federal dollars have changed the academic research enterprise and informatics is in demand.
- ▶ The amount of money spent on healthcare will increase.
- ▶ More money will be spent on drugs and devices.
- ▶ Interest in knowledge management in healthcare will increase with an increased focus on the way knowledge can increase efficiency and/or quality.
- ▶ Informatics-related revenue opportunities will continue to be available in the areas of grants, research, and development.
- ▶ There is an ever changing market that will exhibit an increasing appetite for basic and advanced informatics capabilities.

#### Science, technology and research

- ▶ There will be increasing research revolving around personalized medicine leading to more personalized care.
- ▶ There will continue to be significant technological advances in healthcare, especially in devices and pharmaceuticals.

## Messages from AMIA

- ▶ Low resource environments will create innovations that have relevance broadly.
- ▶ There is a critical need to gather evidence in a scientific and computable manner.
- ▶ There is a need for continued discovery.
- ▶ There is a continuing need to evaluate the impact/role of informatics-based systems on wellness, and the cost and quality of care.

### Informatics education

- ▶ The profession of Informatics is continually evolving. New and new types of educational programs will be needed.
- ▶ The informatics workforce will continue to grow and most of the growth will not be in the academic area.
- ▶ There are multiple emerging informatics roles as various levels of education are defined that should be aligned to provide value.
- ▶ There will be an advanced certificate in nursing informatics.
- ▶ There will be a board certification process for clinical informatics.
- ▶ More training programs will be needed to prepare for certification.
- ▶ Informatics as a field (academic discipline) needs to mature with its methods and scientific foundation.
- ▶ There is a significant opportunity for informatics as a discipline resulting from increasing healthcare complexity, increasing information flow, and increasing challenges to decision-making in the health sector.
- ▶ Informatics is increasingly seen as an essential basic science in the curricula of professional schools, that is, medical, nursing, pharmacy, dental, allied health, etc.
- ▶ There will be educational needs about informatics for non-professionals.
- ▶ AMIA is the leading organization to move informatics education forward and to make informatics a recognized profession.

### Healthcare

- ▶ There are a lot of dollars in healthcare, and informatics can help us to use those dollars more effectively.
- ▶ The “medical home concept” will become an important approach to increasing the efficiency and quality of care.
- ▶ Healthcare teams will provide care using data and tools that support the coordination of care. The focus on population health will continue.
- ▶ Genetic research will continue to change treatment options, thereby affecting how healthcare is delivered.
- ▶ Informatics will capture, analyze, and present data in easy to understand ways and support better decision making by healthcare practitioners.

- ▶ Personalized medicine and PHRs will evolve.
- ▶ Care capabilities will move from hospitals toward ambulatory care and home settings.

### Consumers

- ▶ The healthcare system is changing to a consumer-driven or consumer-centric system in which consumers play a more active role.
- ▶ There is a continuing need to evaluate the impact/role of informatics-based systems on wellness, and the cost and quality of care.
- ▶ There will be an increasing need to educate the consumer on the value and use of personal health records.
- ▶ Personal health records will become routinely integrated into practice workflows.
- ▶ Consumer health will involve more telehealth and alternative ways to interact with clinicians.

### Policy, legislation and regulations

- ▶ Engagement based on trusted and unbiased knowledge will be needed.
- ▶ There will be increased regulations and standards influencing the field.
- ▶ Significant national policy issues, such as the current meaningful use policy, will cast a long shadow over the next 5 years and will set the stage for the subsequent era.
- ▶ There will be pressures to “bend the curve” of healthcare costs.
- ▶ Electronic health record adoption will create changing environmental conditions leading to new challenges for informatics.

### Industry development and competition

- ▶ Competition from a variety of external sources will heighten.
- ▶ Policy initiatives and extraordinary funding will dramatically stimulate and reshape the industry, through consolidation, disruption, and technologic evolution.
- ▶ AMIA should recognize and meet the needs of policy makers and industry in identifying cost-effective strategies that support implementation of industry-wide standards, tools, and services that advance policy goals. AMIA will assume the dual role of trusted source and leader for such information.
- ▶ Now that clinical information systems have matured, industry will play an increasingly important role in HIT and informatics directions.

### AMIA's role

- ▶ AMIA can contribute to the existing continuum of education needs.
- ▶ AMIA is a source of needed education.

**Pillar 1** AMIA's informatics leadership

Concept	Framing issues	Goal
AMIA's Informatics Leadership	<ul style="list-style-type: none"> <li>▶ Establish priorities and focus areas</li> <li>▶ Policy knowledge</li> <li>▶ Identify crucial issues and bring experts together</li> </ul>	<ul style="list-style-type: none"> <li>▶ AMIA will be the first stop for trusted knowledge for transforming healthcare through biomedical informatics.</li> </ul>

- ▶ AMIA is the home of informatics- and boundary-spanning informaticians, offering a place where they can interact at the individual level and within groups.
- ▶ AMIA is the trusted source for unbiased policy advice.
- ▶ AMIA will continue to support its corporate members and partners with specialized education, training and networking programs as they create cultures of informatics within their own organizations.
- ▶ Health information technology will be disseminated widely. Much of it will be done well, but there will be problems. AMIA should be the organization that assures that lessons of the next 5 years are captured and applied to new generations of clinical information systems.
- ▶ AMIA should advocate for continued biomedical informatics research funding.

**DOMAINS**

AMIA recognizes that the discipline of biomedical informatics is inherently motivated by problems encountered in a set of applied domains in biomedicine. The first category historically has been *clinical informatics*, with its emphasis on patients and clinical care. The second early domain of activity has been *imaging informatics* (and the set of issues developed around both radiology and other image-management and image-analysis domains such as pathology, dermatology, hematology, and molecular visualization). In the 1990s we saw the emergence of *bioinformatics*, which at the molecular and cellular level is offering challenges that draw on many of the same informatics methods. More recently we have seen rapid growth in the field of *public health informatics*, in which similar methods are generalized for application to populations of patients rather than to single individuals.

There is a spectrum as one moves from the microscopic to the macroscopic elements in biomedicine. In bioinfor-

matics, workers deal with molecular and cellular processes in the application of informatics methods. At the next level, workers focus on tissues and organs, which tend to be the emphasis of imaging informatics work (also called *structural informatics* at some institutions). Progressing to clinical informatics, the focus is on individual patients, and finally to public health informatics, where researchers address problems of populations and of society. Biomedical informatics, and thus AMIA, has important contributions to make across that entire spectrum.

AMIA provides an inclusive community for various disciplines interested in informatics, encouraging novices to experts to share and collaborate around knowledge. Recognizing that image analysis has its own community of researchers, its own journals, and its own meetings, AMIA has tended to deemphasize this aspect of the field, both in our journal and at our meetings. Similarly, given the large and burgeoning field of computational biology, with its own professional societies, meetings, and journals, AMIA has chosen to focus on those aspects of bioinformatics that are most relevant to human disease and health, often called *translational bioinformatics*. Our organization has also highlighted two special subfields of biomedical informatics, one of which (*clinical research informatics*) sits at the interface between translational bioinformatics and clinical informatics. The other, *consumer health informatics*, combines elements of both clinical informatics and public health informatics.

AMIA accordingly actively supports five domains across a continuum from the research areas through to clinical practices to the consumer and public health areas and has defined them as such. Knowledge and collaboration range throughout each of the domains and is essential for the field.

**Translational bioinformatics**

Translational Bioinformatics is the development of storage, analytic, and interpretive methods to optimize

**Pillar 2** Serving AMIA's Members

Concept	Framing Issues	Goal
Serving AMIA's Members	Benefits, Recruitment, Retention, Support, Working Groups	AMIA members are <u>the</u> core component in AMIA's trusted knowledge goal. Therefore AMIA's goal is to support and encourage its members and will continue to build and support its membership organization and programs for this purpose.

**Messages from AMIA****Pillar 3 Sharing AMIA's Knowledge**

Concept	Framing issues	Goals
Sharing AMIA's Knowledge	Conferences, Education, Publications, Life Long Learning, Knowledge creation,	<ul style="list-style-type: none"> <li>▶ AMIA will determine the best ways to provide educational opportunities for existing members, the emerging health informatics workforce, and consumers.</li> <li>▶ AMIA will strive to have the best vehicles for academic communications in the field of informatics.</li> </ul>

the transformation of increasingly voluminous biomedical data, and genomic data, into proactive, predictive, preventive, and participatory health. Translational bioinformatics includes research on the development of novel techniques for the integration of biological and clinical data and the evolution of clinical informatics methodology to encompass biological observations. The end product of translational bioinformatics is newly found knowledge from these integrative efforts that can be disseminated to a variety of stakeholders, including biomedical scientists, clinicians, and patients.

**Clinical research informatics**

Clinical Research Informatics involves the use of informatics in the discovery and management of new knowledge relating to health and disease. It includes management of information related to clinical trials and also involves informatics related to secondary research use of clinical data. Clinical research informatics and translational bioinformatics are the primary domains related to informatics activities to support translational research.

**Clinical informatics**

Clinical Informatics is the application of informatics and information technology to deliver healthcare services. At times, this has also been referred to as applied clinical informatics. Despite some acknowledged variations, AMIA considers informatics when used for healthcare delivery to be essentially the same regardless of the health professional group involved (whether dentist, pharmacist, physician, nurse, or other health professional). Clinical Informatics is concerned with information use in healthcare by clinicians. Clinical informatics includes a wide range of topics ranging from clinical decision support to visual images (eg, radiological, pathological, dermatological, ophthalmological, etc); from clinical documentation to provider order entry systems; and from system design to system implementation and adoption issues.

**Consumer health informatics**

Consumer Health Informatics is the field devoted to informatics from multiple consumer or patient views. These include patient-focused informatics, health literacy and consumer education. The focus is on information structures and processes that empower consumers to manage their own health—for example, health information literacy, consumer-friendly language, personal health records, and Internet-based strategies and resources. The shift in this view of informatics analyses consumers' needs for information; studies and implements methods for making information accessible to consumers; and models and integrates consumers' preferences into health information systems. Consumer informatics stands at the crossroads of other disciplines, such as nursing informatics, public health, health promotion, health education, library science, and communication science.

**Public health informatics**

Public Health Informatics is the application of informatics in areas of public health, including surveillance, reporting, and health promotion. Public health informatics, and its corollary, population informatics, are concerned with groups rather than individuals. Public health is extremely broad and might even reflect an interest in information technology with regard to ecology, architecture, climate, agriculture, and such. Generally, AMIA focuses on those aspects of public health that enable the development and use of interoperable information systems for public health functions such as biosurveillance, outbreak response, and electronic laboratory reporting.

**THE AMIA PILLARS**

Based upon the data collected from the members, the Board retreats, and the planning assumptions, four pillars emerged as supporting AMIA as an Association.

**Pillar 4 Sustaining AMIA**

Concept	Framing issues	Goals
An effective and sustained AMIA	Board Process, Committees, Marketing and Communications Staff, Space, Organization, General sustainability, grants, fundraising, etc	<ul style="list-style-type: none"> <li>▶ To develop a plan to sustain AMIA through times of positive and negative economics.</li> <li>▶ To update AMIA's organizational infrastructure and governance to enable rapid response and nimbleness to emerging issues.</li> </ul>

- ▶ The First Pillar is AMIA's Informatics Leadership and in this area the strategic goal is that AMIA will be the first stop for trusted knowledge for transforming healthcare through biomedical informatics.
- ▶ The Second Pillar is Serving AMIA's Members. AMIA members are the core component of AMIA's trusted knowledge goal. Therefore AMIA's goal is to support and encourage its members and will continue to build and support its membership organization and programs for this purpose.
- ▶ The Third Pillar that emerged is Sharing AMIA's Knowledge. AMIA has multiple ways to provide educational opportunities for existing members, the emerging health informatics workforce, and consumers. AMIA will also strive to have the best vehicles for academic communication in the field of informatics.
- ▶ The Fourth Pillar is an Effective and Sustained AMIA. Goals are to develop a plan to sustain AMIA through times of positive and negative economics and to update AMIA's organizational infrastructure and governance to enable rapid response and nimbleness to emerging issues.

## PILLAR OBJECTIVES

### Pillar 1: Informatics Leadership

There are six mega targeted areas that underpin this goal.

- ▶ Advancing **professionalism**—this is the specialty recognition, certification, competencies, etc.
- ▶ Advancing **global** connections and partnership
- ▶ Advancing **education**
- ▶ Advancing **quality** healthcare
- ▶ Advancing informatics thought **concepts (research)**
- ▶ Being a trusted source to advance **policy**:

### Objectives

- ▶ AMIA will appoint a group to develop a process for prioritizing, discussing, and implementing new ideas into AMIA's suite of programmatic offerings. This group will focus efforts on the objectives noted in this strategic realignment document to bring more information, ideas, and concepts forward as soon as possible.
- ▶ AMIA will support global connections and partnerships by supporting the Global Health Informatics Partnership (GHIP) and other non-profit organizations that seek to develop and promote global biomedical and health informatics. AMIA will work with the International Medical Informatics Association in the support of global connections and partnerships.
- ▶ AMIA will continue to develop clinical informatics as a medical subspecialty and will support the integration of clinical informatics into other disciplines to serve other member populations.

- ▶ AMIA will develop and articulate communication messages for all our members about the realigned AMIA mission and goals.
- ▶ AMIA will support the rebranding initiative to expand the familiarity and influence of the organization within the healthcare, scientific, and educational communities.
- ▶ AMIA will better communicate AMIA's value and mission to potential members, policy makers, opinion makers, journalists and the general public.

### Pillar 2: Serving AMIA's Members

- ▶ AMIA will develop a pipeline of new members from all sectors of the industry to support our individual member growth.
- ▶ AMIA will update its corporate membership program to address the changing needs of our industry partners.
- ▶ AMIA will establish a non-profit membership program to address the needs of our non-profit partners.
- ▶ AMIA will significantly improve the renewal retention rate of our current members.
- ▶ AMIA will evaluate and enhance the working group program.
- ▶ AMIA will engage the American College of Medical Informatics (ACMI) in strategic planning to align ACMI and AMIA goals.

### Pillar 3: Sharing AMIA's Knowledge

- ▶ AMIA will determine the best way to establish its goal on sharing knowledge.
- ▶ AMIA will conduct a detailed analysis ("environmental scan") to be sure that new educational offerings do not cannibalize existing offerings.
- ▶ AMIA will develop a blueprint for future programs that will align member domains across a matrix for education, publications, and policy.
- ▶ AMIA will undertake an analysis of its educational offerings and develop a list of enhancements that can serve the new HIT workforce.
- ▶ AMIA will develop a biomedical informatics career ladder for our community.
- ▶ AMIA will develop education to support clinical informatics certification.

### Pillar 4: Sustaining AMIA

- ▶ AMIA will reconfigure its bylaws and standard operating procedure to support a more streamlined operation and nimble organization.
- ▶ AMIA will appoint a task force to recommend changes to our committee structure based on the realigned strategic plan.

## SUMMARY

This plan was generated from the input of multiple AMIA members and then organized into the pillars, goals and objectives in this report. Concepts for the future emerged as a result of the sifting. It is our plan as AMIA leaders to use this strategic realignment

## Messages from AMIA

to measure ourselves, our leadership, and our direction. We ask that you join us. There are multiple opportunities for member participation within AMIA and if you see something in this plan in which you are particularly interested, please let us know. We value your individual participation and contributions. AMIA is its members!

### **Nancy M Lorenzi**

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