Assignment: Discuss with members of your team how the organizations support interoperability for health data standards. Consider the following factors in your discussion:

- Stated purpose of organization
   Collaborative efforts
- 3. Membership
- 4. Publications
- 5. Accomplishments

Criteria	Health Affairs - K	IMIA - J	ISO -	HL7 - M
Stated Purpose	Health Affairs is the leading journal of health policy thought and research. All papers are peer-reviewed, and the acceptance rate is 10–15 percent. Published since 1981, Health Affairs is nonpartisan and presents a wide range of timely research and commentary on health issues of current concern in both domestic and international spheres.  "For more than 20 years, Health Affairs has been a must-read for anyone with a serious interest in medicine, health care, and health care policy," (Washington Post, 11 January 2004).	IMIA plays a major global role in the application of information science and technology in the fields of healthcare and research in medical, health and bio informatics. The basic goals and objectives of the association are to:  • promote informatics in health care and research in health, bio and medical informatics. • advance and nurture international cooperation. • to stimulate research, development and routine application. • move informatics from theory into practice in a full range of health delivery settings, from physician's office to acute and long term care. • further the dissemination and exchange of knowledge, information and technology. • promote education and responsible behaviour. • represent the medical and health informatics field with the World Health Organization and other international professional	International Organization for Standardization (ISO) is the world's largest developer of standards. Its principal activity is development of technical standards for a product, material, or process. These standards have major economic and social impacts. US companies can by products, materials, and processes from foreign countries and be able to use it with products made in the US. ISO gives agreement on specifications and criteria to be applied consistently in the classification of materials, in the manufacture of supplies and products, in testing and analysis, in terminology, and in the provision of services. In other words, computers from different vendors are able to talk to each other because of the existence of ISO. You or I would not be able to communicate to each other via computer without it. "Standardization of connections and interfaces of all types ensures the compatibility in equipment of diverse origins and the interoperability of different technologies. Without it, technology developments would be handicapped." For example, all	"To provide standards for the exchange, management and integration of data that support clinical patient care and the management, delivery and evaluation of healthcare services Specifically, to create flexible, coeffective approaches, standards, guidelines, methodologies, and related services for interoperabil between healthcare information systems."

Criteria	Health Affairs - Kim	IMIA - Joanna	ISO - Pat	HL7 - Marilyn
		and governmental organizations.  In its function as a bridge organization, IMIA's goals are:  • moving theory into practice by linking academic and research informaticians with care givers, consultants, vendors, and vendor-based researchers.  • leading the international medical and health informatics communities throughout the 21st century.  • promoting the cross-fertilization of health informatics information and knowledge across professional and geographical boundaries.  • serving as the catalyst for ubiquitous worldwide health information infrastructures for patient care and health research.	USB port are the same size, etc. and allows easy equipment connections for such items as a jump drive, and mouse.  Strategic plans for 2010 are:  1. to develop a consistent and multi-sector collection of globally relevant International Standards.  2. to ensure involvement of stakeholders  3. to raise the awareness and capacity of developing countries  4. to being open to partnerships for efficient development of International Standards  5. to promoting the use of voluntary standards as an alternative or as a support to technical regulations  6. to being the recognized provider of International Standards and guides relating to conformity assessment  7. to provide efficient procedures and tools for the development of a coherent and complete range of deliverables.	
Collaborative Efforts	ever published is available online at <a href="https://www.healthaffairs.org">www.healthaffairs.org</a> . The 24-year archive is fully searchable. All back content is free access after three years. Selected content is free access at time of posting, including Editor's Choice articles, Web Exclusives, Narrative Matters, Grants and Outcomes, UpDate Publications, Book Reviews, and Letters. Health Affairs is an	IMIA strives to work in harmony with international organizations and agencies that share and complement professional and philosophical goals and objectives. We are honored to be formally affiliated with the following organizations:  International Federation for Information Processing (IFIP)  International Federation of Health Records Organizations  World Health Organization	For ISO, standards are developed based on the following principles:  • consensus – all views of interest are taken into account – manufacturers, vendors, users, consumer groups, testing laboratories, governments, engineering professions, and research organizations  • industry wide – global solutions to satisfy industries and customers worldwide  • voluntary – global standards are market- driven and therefore voluntary involvement of all interests in the market place.	HL7 strives to identify and support the diverse requirements of each of its membership constituencies: Users, Vendors, and Consultants. These are the agreements that HL7 has with various other Standards Development Organizations and other groups. Accredited Standards Committee X12 ASC-X12  American Society for Testing Materials — ASTM CEN/TC 251  Clinical Data Interchange

Criteria Health Affairs - K	IMIA - J ISO -		HL7 - M
Criteria  Health Affairs - K  original signatory to the Washington, D.C. Principles for Free Access to Science. Health Affairs' Web site is maintained in conjunction with Stanford University's HighWire Press.  Health Affairs authors include top scholars, policymakers, and health care industry leaders. Health Affairs receives about 800 manuscripts annually. Each paper is reviewed by the editors for timeliness and relevance to the journal's objectives. About half of these submissions are selected for external review.	An indexpression expression proportion interests agrees agree interests agrees in particular proportion	ndustry sector usually esses a need for a standard. A losal is sent to a national body ober. It then proposes it as a k item for ISO as a whole. This lally recognizes the need for a dard. A three part process s place: se 1. A definition of the nical scope of the future dard is developed through king groups of technical experts of different countries who are ested in the subject – requires ement from all involved. se 2. Countries then negotiate detailed specifications within standard through a consensus ding. se 3. Formal approval of the ltant draft International indard is approved by 2/3 of the members that have actively cipated in this process and	Standards Consortium — CDISC  Digital Imaging and Communication In Medicine — DICOM  eHealth  Institute for Electrical and Electronic Engineers IEEE  Medbiquitous  National Council for Prescription Drug Program — NCPDP  OASIS  Object Management Group —OMG  University of Nevada Las Vegas — UNLV

Criteria	Health Affairs - K	IMIA - J	ISO - P	HL7 - M
			Joint ISO/IEC/International Telecommunication Union (ITU). ITU is part of the United Nations Organization and its member governments. The three organizations strongly collaborate on standardization in the fields of information technology and communications. They are the three major organizations in international standardization. These organizations work collaboratively with the World Trade Organization (WTO) to promote a free and fair global trading system. Political agreements through WTO are part of the technical agreements with ISO/IEC/ITU standards development.  ISO regional partners – Many members belong to regional standards organizations.  Specialist liaisons – It liaises with 580 international and regional organizations interested in ISO's work. These include more than 28 international standards-developing bodies outside the ISO/IEC system.	
Membership		IMIA membership consists of National, Institutional and Affiliate Members and Honorary Fellows.  National Members represent individual countries. A member is a society, a group of societies, or an appropriate body, which is representative of the medical, and health informatics activities within that country. Where no representative societies exist, IMIA accommodates involvement	ISO membership is open to national standards institutes or similar organizations that represent standards in their country (one member in each country).  Full members or Member bodies have one vote. There is a membership fee. Countries with fewer resources can pay a reduced fee through two other categories of membership.  Correspondent members are	Membership in HL7 is available to everyone interested in the development of a cost-effective approach to system connectivity providers, vendors, payers, consultants, government groups and others who have an interest in the development and advancement of clinical and administrative standards  Membership may be individual or institutional

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		through "Corresponding" members within developing countries.  National IMIA members may organize into regional groups. Currently, such regions exist for Latin America and the Caribbean (IMIA LAC), Europe (EFMI), Asia/Pacific (APAMI) and Africa (Helina); an initiative to structure a North American region was started in 2001.	organizations in countries which do not have a fully developed national activity standards. They are not actively involved in the development of the standard but are kept informed on the work of interest.  Subscriber members are institutes from other countries with very small economies who wish to maintain contact with international standards.	
		Institutional Members consist of corporate and academic members. Corporate members include vendor, consulting, technology firms as well as national professional organizations. Academic members include universities, medical centres, research centres and like institutions.		
		Affiliate Members consist of international organizations that share an interest in the broad field of health and medical informatics.  Honorary Fellows are individuals who have earned exceptional merit in furthering the aims and interests of the IMIA; fellowship is conferred for life.		
Publications	Publications:  Frequency: Number of issues per year is six with additional supplements. Online-only papers are published weekly on	Journals & Magazines  Healthcare Informatics McGraw-Hill  Methods of Information in Medicine Schattauer GMBH International Journal of Medical Informatics	ISO has some 12,000 International Standards with representation of more than 300,000 pages in English and French.  Standards Handbooks, Documents, Manuals - Standards that might specifically for	Newsletter published several times per year Publication of standards and revisions

Criteria	Health Affairs - K	IMIA - J	ISO - P	HL7 - M
Criteria	Health Affairs - K average as Web Exclusives.  Pages: Pages published in 2004 total 2,578, including Supplements. Three Supplements were published in 2004.  Inside the Journal: Health Affairs is divided into the following major sections:  • Feature articles: New proposals, original research, and analysis of timely health policy issues  • Commentary: Opinions and proposals for change.  • Interviews: Conversations with leaders in government and the private sector  • Narrative Matters: Personal stories about the health care system that highlight policy issues of concern	Elsevier Health Sciences Division Informatics in Primary Care Radcliffe Medical Press Health Care and Informatics Review OnlineTM Enigma Publishing Artificial Intelligence in Medicine Elsevier Computers in Biology and Medicine Elsevier Computer Methods and Programs in Biomedicine Elsevier	healthcare: IT technology for healthcare applications including CT, Electrical Engineering, Information technology, Image technology.  Other publications: ISO Focus – informational on ISO activities  ISO Management Systems- The International Review of ISO 9000 and ISO 14000 – international references for quality requirements in business and environment.  ISO in Figures ISO Annual Report ISO Strategic Plan for 2005-2010 ISO Code of Ethics ISO Catalog of Standards – lists the entire portfolio of standards.  • World Standards Services Network (WSSN) – a network of publicly accessible Web servers of standards organizations around the world.  • ISONET – the ISO Information Network is a worldwide network	HL7 - M
	analysis and original research     GrantWatch: A review of recently awarded foundation		ISO 50 <sup>th</sup> Anniversary: Friendship among Equals – Recollections from ISO's first 50 Years.	

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	grants and grant outcomes,			
	with regular essays or special			
	reports about health			
	philanthropy			
	UpDate: News from the			
	states or other countries, plus			
	abstracts of important new			
	publications			
	Book Reviews			
	<ul> <li>Letters to the Editor: Lively</li> </ul>			
	discussion of issues raised in			
	Health Affairs papers			
	Thematic Issues: Health			
	Affairs publishes both thematic			
	and "variety" issues every			
	year. Thematic issues (up to			
	five per year) are devoted to			
	in-depth exploration of a single			
	topic.			
	Web Exclusives: Online-only			
	papers are published weekly,			
	on average, as Web Exclusives			
	at www.healthaffairs.org. An			
	abstract for each Web			
	Exclusive paper is published in			
	the first bound volume that			
	follows the paper's publication			
	on the Web. Web Exclusive			
	papers are subject to the same			
	peer review, evaluation, and			
	editing as any other paper			
	published by <i>Health Affairs</i> .			

Criteria	Health Affairs - K	IMIA - J	ISO - P	HL7 - M
	They are indexed in the literature at time of posting and annually with the journal's yearly index, by author and by subject. Search the <i>Health Affairs</i> Archives			
	Indexes/Abstracts: Health Affairs is indexed and/or abstracted in Current Contents/Health Services Administration and Social and Behavioral Sciences; EBSCOhost; Health Planning and Administration Database; Index Medicus; International Pharmaceutical Abstracts; MEDLINE; Lexis-Nexis; OCLC; ProQuest; the Sciences and Social Sciences Citation Index; and SwetsWise Online Content.			
Accomplishment s	Accomplishments:  "For more than 20 years, Health Affairs has been a must-read for anyone with a serious interest in medicine, health care, and health care policy," (Washington Post, 11 January 2004).  Impact Factor: Health Affairs is the number one cited journal in	Activities MEDInfo's IMIA organizes the internationally acclaimed tri-annual "World Congress on Medical and Health Informatics @, MEDInfo. MEDInfo - 2001, held in London, UK, September 2 - 5, 2001 at the newly developed Docklands area was hosted by the British Computer Society: Health Informatics Specialist Group. It was a highly successful scientific event. MedINFO 2004 will be held at the Hilton Hotel in San Francisco, USA	"Conformity assessment" encourages best practice and consistency when products, services, systems, processes and materials need to be evaluated against standards, regulations or other specifications. ISO checks that products, materials, services, systems, or people measure up to the specifications of a relevant standard. "Conformity assessment" is the technical term given to the process of evaluation and approval. Its standards and guides harmonize conformity assessment worldwide	Designated standards for HIPPA legislation     Reference Information Model including templates, vocabulary and XML     Developed messaging standard for electronic data exchange in healthcare environments (ANSI approved)     CDA standard exchange model for clinical documents     CCOW clinical context management specification     Arden Syntax for Medical Logic Modules

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its categories (Health P Health Care Science an Services) in both the Si Edition and Social Scien Edition of the Institute Scientific Information's impact factor.  Press Citations: Health frequently cited by nati media, including theWa Post, New York Times, Wall Journal, CNN, network to and radio, and Nationa Radio. The January 12, WashingtonPost cited Health as "the bible of health p  Policy Reach: Health Af health policymakers' m frequently read journal consulted by 55% of st members on U.S. congressional committed jurisdiction in health—a JAMA and the New Eng Journal of Medicine, wh read by 17% and 10% members, respectively independent survey by Center for Studying He System Change).	on September 7—11, 2004. Potential participants and exhibitors are encouraged to visit their web site at <a href="www.medinfo2004.org">www.medinfo2004.org</a> . The American Medical Informatics Association (AMIA) hosts MedINFO 2004.  Previous MEDInfos have been held in Stockholm (1974), Toronto (1977), Tokyo (1980), Amsterdam (1983), Washington (1986), Beijing/Singapore (1989), Geneva (1992), Vancouver (1995) and Seoul (1998).  Working and Special Interest Groups The IMIA family includes a growing number of Working and Special Interest Groups, which consist of individuals who share common interests in a particular focal field. The groups hold Working Conferences on leading edge and timely health and medical informatics issues.  Current and future activities of the Working and Special Interest Groups are posted on the IMIA Website at www.imia.org  Other Initiatives In the next few years IMIA will focus on "bridging the knowledge and" by facilitating and providing and	and so facilitate international trade. The ultimate aim is to make products and services acceptable in all countries on the basis of a single assessment and approval in one country.	

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		Education.		
		IMIA reached a major milestone in		
		completing a major redevelopment		
		of its web-site www.imia.org. The		
		site now contains profiles on its		
		members, working groups and		
		activities. The site uses a dynamic		
		database to facilitate user-friendly		
		communications for news,		
		announcements, and an events calendar for the public, and access		
		to e-mail communications, minutes,		
		reports and association information		
		for its members.		
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		IMIA is constantly striving to further		
		the services it provides to its		
		members and the informatics		
		community in general. The		
		organization will expand its existing		
		database in the support of the		
		development of a Professional		
		Resource Index, a database that		
		will serve the purpose of providing		
		access to the vast knowledge, skills		
		and expertise of individuals who		
		have participated in IMIA activities. Completion of this project is		
		expected in 2002.		
		οπροσίου III 2002.		
		At the fall meeting of 2000, a task		
		force was established by the		
		General Assembly to develop an		
		Ethical Code of Practice for		
		adoption by IMIA. The resulting		
		draft was reviewed by the General		
		Assembly in the 2001 meeting,		
		following detailed consultation with		
		IMIA member countries it is		
		planned that a formal draft will be		
		submitted for approval in the fall of		
		2002. This work is being conducted		

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		under the umbrella of IMIA WG4 on Data Protection in Health Information Systems.  The goal of these initiatives is to provide the health professional and the patient with information when they need it, where they need it, and how they need it.		
	Lorenzi and Riley speak of readiness for change, referring to the readiness of the members of the organization. By virtue of the stated mission of Health Affairs, (i.e., "Health Affairs is nonpartisan and presents a wide range of timely research and commentary on health issues of current concern in both domestic and international spheres"), one might deduce this is an organization that functions as a change agent.	The Ozbolt article used the criteria by Lorenzi and Riley re: Readiness for change that includes 17 items. IMIA demonstrates efforts in the many of criteria identified by L&R. Here are some examples: sponsorship, (they are well represented by corporate sponsors), leadership (members of their working groups are leaders in their fields), motivation (IMIA stated goals are focused on playing a "major global role" in application of information science & technology and to act as a bridge organization), direction (multiple experts in the various informatics field participate in IMIA), organizational context (IMIA is linked globally to multiple organizations; has an extensive membership network, i.e., national, institutional, corresponding, & affiliate memberships). Lorenzi and Riley describe organization as the members of that organization as the members of that organization exemplifies their readiness for change, which contributes to their ability to achieve semantic interoperability.	Standards are reviewed at intervals every five years for a new technological developments, new methodology and materials, new quality, and safety requirements.  Currently there is a standard - ISO 18104:2003 Health informatics Integration of a reference terminology model for nursing that was formally published in 2003. It will be reviewed and updated before 2008.	HL7 adheres to a well-defined set of operating procedures that ensures consensus, openness and balance of interest HL7 develops a set of protocols on the fastest possible rack that is both responsive and responsible to its members
Critical Skills	Three types of skills are	An example of IMIA ability to		Technical skills are

		IMIA - J	ISO - P	HL7 - M
desc cond tech requ the d build inter relat the v whol dem tech man both hum the u multi valid publi colla	cribed by Lorenzi and Riley: ceptual, human, and nnical. Technical skills are uired to do the basic work of organization; human skills d teams, and encourage raction; and conceptual skills te the work of each part to whole and to the world as a ole. Health Affairs certainly nonstrates all 3 skills, nnically they have the skills to nage publications, use of a conceptual skills and nan skills might be viewed as use of peer review to utilize tiple and varied opinions to date each article and then lish to the readers a aborative approach to essing the news worthiness ach article. The conceptual	incorporate critical skills and issues is the Medinfo 2004 conference entitled "Building Informatics for Enhancing Health Care, Research, and Education." The attendee list alone was 49 pages, reflecting the global participation. There were 1280 types of submissions in the form of papers, posters, demonstrations, workshops, etc. The contributions were primarily from North America and Europe, but also included other global contributions. The accepted papers represented the tracks or areas of informatics, for example, clinical informatics, knowledge management, human and organ issues, enabling technologies, etc. IMIA as an organization clearly has the ability to push forward current issues, concepts, discoveries and thinking related to new technology and semantic interoperability.		demonstrated by the technical committees of the organization which are directly responsible for the content of the Standards. One of these groups is the Vocabulary Technical Committee, charged with providing an organization and repository for maintaining a coded vocabulary that, when used in conjunction with HL7 and related standards, will enable the exchange of clinical data and information so that sending and receiving systems have a shared, well defined, and unambiguous knowledge of the meaning of the data transferred. The HL7 special interest groups explore new areas of content which may need coverage in the Standards utilizing conceptual and human skills. In addition, the conceptual skills are demonstrated via the RIM, or the Reference Information Model currently being developed (version 3). This large object model is a pictorial

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				representation of clinical data (domains) and identifies the life cycle of events that a message or group of related messages will carry.  • Human skills are utilized throughout the organization evidenced by the committee/group structures and chairs, cooperation among groups inside and outside this volunteer organization, and breath and depth of members.
Critical Issues	Health Affairs, as an organization, facilitates the exchange of information that is timely and relevant in health care, on a global level.  Timeliness of the articles would reflect an understanding of the needs of health care, including the "end user" who might be considered the policy leaders in our field.			HL7 addresses the unique requirements of already installed hospital and departmental systems, some of which use mature technologies. While HL7 focuses on addressing immediate needs, the group continues to dedicate its efforts to ensure concurrence with other US and International standards development activities.      Critical issues: HIPPA standards, RIM, Vocabulary, XML, Updating the messaging standard.

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Change Management Psychology	Lorenzi and Riley state: "In the real world, the impact of inertia is huge. If not pressured, both organizations and individuals will tend to continue doing what they currently do."  They also state that an important source of pressure in the Nursing summit was the prestige of the participants. Health Affairs would by virtue of the caliber of the authors and experts who contribute to the publication, continue to "raise the bar" and facilitate change where needed.	Lorenzi & Riley indicate that an important "source of pressure is the prestige of the participants" and go on to say that the desire to be part of a prestigious group is motivating. An excellent example of Psychology of Change by IMIA is the "Award Of Excellence" given at the 2004 Medinfo Conference. This award is to recognize the work of an individual contribution to the field of informatics. Individuals who can be recognized for their efforts and contributions identifies them as the "prestigious" and certainly something to strive for as a member of IMIA.		<ul> <li>HL7 as an organization supports a committee structure. This structure, balanced balloting procedures and open membership policies ensure that all requirements are addressed uniformly and equitably with quality and consistency.</li> <li>Each Technical committee and SIG is chaired by two or more co-chairs. Collectively, the co-chairs form the Technical Steering Committee, which votes on issues related to the standard. These votes are then passed as recommendations to the Board of Directors who make the final decision. (The Board consists of 8 elected and 3 appointed positions).</li> </ul>
Change Management Strategies	Lorenzi and Riley refer to "feedback and options" – this seems to be the best fit for a publication like Health Affairs as they offer information, opinions, and results of research to those in decision making roles in the heatlh care field.	The multiple workgroups and national membership groups (Dr. Lorenzi is the president of AMIA!) demonstrate IMIA's ability to create a forum for changing the informatics world. The planning of meetings for 2006 and 2007 are already underway. The members services section was password protected so I was unable to view the content. Given the other information from their web site,		HL7 members are encouraged to participate on committees in order to assure that their needs are known and addressed.

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		IMIA certainly presents itself as an organization that welcomes feedback and information from its participants.		
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