



HEAL COLLECTION DEVELOPMENT POLICY

VERSION 1.0, SEPTEMBER 2004

VERSION HISTORY

Version	Date	Changed By	Changes Made
0.1	19 Sept 2003	SAM, SRD	Initial draft
0.2	29 Sept 2003	SRD	Added to Components of the Collection
0.3	31 Oct 2003	SRD	Expanded Purpose of this Document; added User Community and Scope sections; revised Components of the Collection; added Selection Criteria, Removal of Items, Persistence and Archiving, and Priorities
0.4	05 Nov 2003	SRD	Moved lists topic areas to Appendices; added to Relevant Characteristics in Priority Assessment
0.5	21 April 2004	SED, SAM, SRD	Updated Sections Mission and Vision; removed all references to K-12 education; revised Scope, Selection Criteria and Resource Quality, and Collection Maintenance and Archiving; added to Technical Options for Accession
0.6	30 April 2004	SRD	Added Objectives and Metadata Extensions; restructured Selection Criteria and Resource Quality; added HEAL triage diagram to Approval Process; added Peer Review; added History; revised Collection Development Strategy and Priorities; expanded Technical Options for Accession; updated Recommended Practices and References
0.7	21 May 2004	SRD	Added hyperlinks to referenced documents; edited language throughout; Recommended Practices and References
0.8	21 July 2004	SAM, SRD	Added version history and revised version numbering
0.9	19 August 2004	CC, SU, SRD	Edited based on input at team meeting 07/30/2004
0.91	20 August 2004	CC, SU, SRD	Revised to incorporate peer review publishing model and AAMC initiative
0.92	24 August 2004	CC, SRD	Language edits
0.93	2 Sept 2004	SAM, SRD	Minor corrections
0.94	14 Sept 2004	SU, SAM, SRD	Edited throughout
0.95	20 Sept 2004	CC, SAM, SRD	Minor edits
1.0	23 Sept 2004	SRD	Updated links

1.0 INTRODUCTION

For details regarding the mission and vision of the Health Education Assets Library (HEAL) please consult the Web site (<http://www.healcentral.org/about/aboutHEAL.jsp>).

1.1 Purpose of this Document

This document is intended for internal use by the HEAL team and federation partners in the HEAL digital library. This document describes a collection development policy and strategy for building the HEAL collection. It specifies the clientele the collection is intended to serve, the scope and boundaries of the collection, the methods employed to identify and acquire resources for the collection, selection and prioritization, and general collection maintenance considerations.

1.2 Maintenance of this Document

This document was organized and compiled by the lead metadata librarian/cataloger in consultation with the HEAL team. The lead metadata librarian/cataloger is responsible for ongoing maintenance of this document.

1.3 Definitions

The *HEAL digital library* is a network of resources and collections accessible through a single online search interface.

Resources are individual multimedia files such as images, videos, and animations, as well as more complex learning objects including Web sites and interactive audio/visual tutorials. Resources are Web accessible.

A *collection* is a set of resources.

Affiliate collections are owned and maintained by *federation partners* using internal quality assurance (QA) mechanisms and are searchable through the HEAL interface.

Metadata describe the content, form, and other characteristics of information objects or resources using a standardized structure and vocabulary.

An *author* submits an educational resource to HEAL for peer review and publication.

2.0 USER COMMUNITY

The HEAL collection is intended to meet the educational needs of a wide variety of users, from undergraduate students to self-directed adults, in both formal and informal health sciences education settings. Health sciences educators are the primary target audience of HEAL, with a special emphasis on medical school faculty. The HEAL collection also supports the general public's need for information in all areas of the health sciences. Therefore consumer and patient education specialists are another primary target audience.

2.1 Educational Levels

The following educational levels are served:

- Undergraduate health sciences-related education
- Graduate health sciences professional education
- Continuing professional development
- Consumer and patient education

2.2 Educational Roles

The following educational roles are served:

- Educator
- Curriculum developer
- Instructional designer
- Librarian
- Healthcare provider, including residents
- Student
- Patient
- General public

3.0 SCOPE

3.1 Subject Coverage

The subject scope of the HEAL collection includes all areas of health sciences-related education, including biochemistry, physiology, anatomy, medicine, nursing, pharmacy, dentistry, and allied health. These subjects are outlined in [Appendix A](#). Any resources and collections of potential use (or reuse) in education and learning that relate to these categories are relevant to the HEAL digital library.

The other broad content area represented in HEAL is consumer and patient education. Targeted topics have been identified based on the Department of Health and Human Services' *Healthy People 2010*. This Federal initiative articulates focus areas guiding the health and prevention agenda through the decade (see [Appendix B](#)).

3.2 Geographic and Language Coverage

The HEAL collection is initially intended to support health sciences education in North America. Many collections and resources contained in HEAL will be of value to educators and learners beyond these borders.

The HEAL collection includes relevant resources from around the world. Resources tend to be in English, but resources in other languages commonly used in health sciences education in North America are also in scope. Metadata is in English.

3.3 Formats of Resources

The HEAL digital library includes resources in a wide variety of formats, including dynamic, interactive, and executable resources. It also includes resources that may require a Web browser plugin, provided that it is widely available. The format and access or user requirements are accurately described in the metadata records.

Resources available through HEAL are all Web accessible.

The [HEAL Metadata Elements Description](#) document contains a comprehensive list of accepted formats.

3.4 Types of Resources

The HEAL digital library includes a wide range of resource types with different applications in the learning context. Specific types of learning resources are listed in the [HEAL Metadata Elements Description](#).

4.0 RESOURCE ORGANIZATION AND DESCRIPTION

Simply having a large diverse collection of resources is not enough. Metadata is very important to the utility of a digital library. Quality metadata embodies key characteristics sufficient to support effective discovery and use by educators and learners. Details regarding metadata and its administration are available in the [HEAL Metadata Policy](#).

4.1 Metadata Requirements

Required metadata elements are enumerated in detail in the [HEAL Metadata Elements Description](#) and the [HEAL Metadata Schema](#).

4.2 Optional Metadata Elements

HEAL metadata includes health sciences specific extensions, and other optional elements designed to capture additional information about resources. These elements are enumerated in detail in the [HEAL Metadata Elements Description](#) and the [HEAL Metadata Schema](#).

5.0 RESOURCE IDENTIFICATION AND SELECTION

5.1 Planning

5.1.1 Assessment of the Current Collection as of August 2004

The initial HEAL collection is comprised of sets of images, videos, and audio resources for health sciences undergraduate and graduate education, and a number of consumer and patient health education resources.

The areas of strength in the current HEAL collection are neuroanatomy, neurology, dermatology, obstetrics and gynecology, cardiology, pathology, and biochemistry, as well as consumer and patient education.

Collection development will focus on those areas not currently represented in the digital library consistent with the vision and mission of HEAL. The co-directors prioritize resource selection and accession, based on findings from needs assessment surveys, input from the AAMC advisory subcommittee, gap analysis of the current collection, and reviewer feedback.

This proactive strategy involves seeking out potential authors and federation partners, assessing their materials, and identifying those resources that will bring the most value to HEAL.

5.1.2 General Objectives for Collection Growth

HEAL will continue to pursue high quality multimedia resources covering a wide range of health education topics for basic and clinical health sciences undergraduate and continuing professional development (see [Appendix A](#)).

HEAL will also incorporate more resources to support consumer and patient health education (see [Appendix B](#)).

HEAL will continue to solicit contributions from individual educators and groups. Prior to a formal peer review process, submitted materials will be reviewed by HEAL staff to ensure conformance to minimal requirements as described below.

Only materials that have been accepted by the editorial board will ultimately be included in the HEAL collection.

5.2 Selection Criteria

5.2.1 Availability

Typically, items selected for inclusion in the HEAL collections must be Web accessible and readily available to users at no charge. Federation partners may have additional authentication requirements.

5.2.2 Unacceptable Resources

Resources that link to other sites without providing added value such as search tools or organizational structures are not eligible for accession into HEAL.

The co-directors reserve the right to exclude resources or affiliate collections at their discretion.

5.2.3 Resources Submitted but not Selected

Resources that are incomplete, do not fall within the scope of the HEAL collection, or are otherwise inappropriate or cannot be processed are not accessioned and the author contacted via email or telephone.

6.0 COLLECTION MAINTENANCE AND ARCHIVING

6.1 Removal of Items

Once a resource or collection has been incorporated into the HEAL collection, further quality checks are periodically performed. If significant technical flaws or content inaccuracies are found, or for any other reason at the discretion of the co-directors, the resource or collection may be deaccessioned from the library, in accordance with the HEAL Collection Deaccession Policy (under development). The author will be consulted prior to undertaking that process.

6.2 Persistence and Archiving

6.2.1 Persistent Naming

An important characteristic of resources in the HEAL collection is that they have unique, persistent names. For those resources where metadata is provided under the [Open Archives Initiative Protocol for Metadata Harvesting \(OAI-PMH\)](#) this is a requirement of the protocol.

HEAL relies upon federation partners to ensure that unique, persistent identifiers are designated and maintained.

6.2.2 Archiving

To be determined.

7.0 QUALITY ASSURANCE

7.1 Initial Triage

Quality, accuracy, and currency are key qualities for health sciences education materials and therefore must be considered in the initial triage. The triage process must also comply with federal law mandating the protection of patient confidentiality. Moreover, users need to be able to assess the utility of resources with ease, particularly in large collections, therefore adequate metadata is essential.

HEAL will strive to assure the quality of our resources and compliance with federal law through a multi-pronged approach: the implementation of a rigorous triage process for submitted resources and measures that ensure compliance with federal privacy regulations. In addition, a rigorous peer review process is under development.

The initial process involves the triage of submitted resources prior to peer review. A professional librarian or HEAL co-director will determine if the resource fits the collection scope and meets other quality criteria. The following diagram illustrates the initial triage:

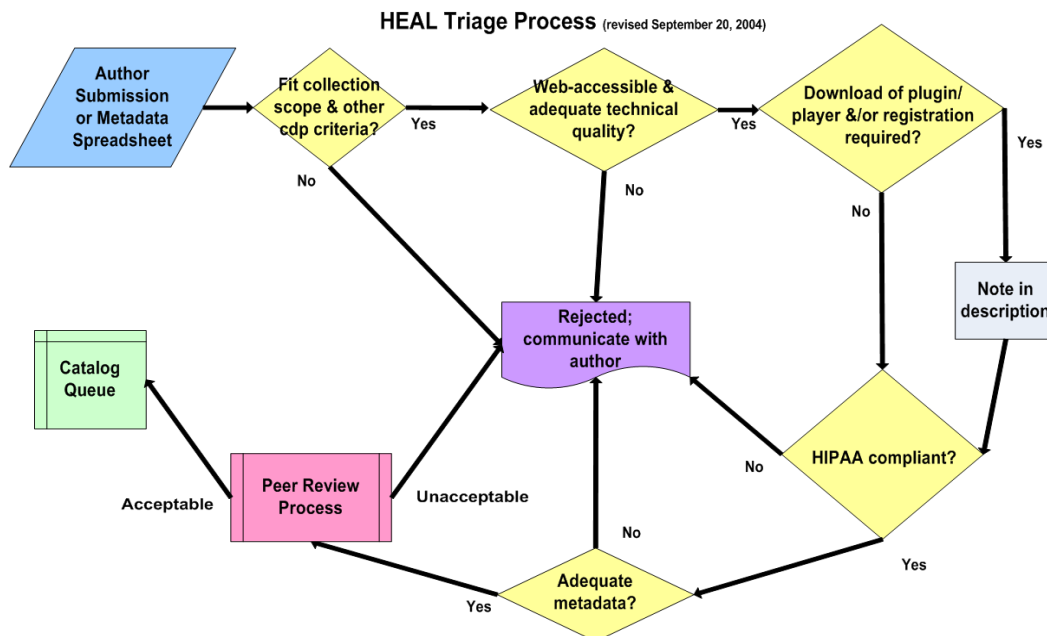


Figure 7A – The triage process.

Compliance with the Health Insurance Portability and Accountability Act (HIPAA) is assured by having authors affirm that a signed form authorizing the release of protected health information is available from any identifiable individual(s) if applicable. Passed in 1996, HIPAA is designed to protect confidential healthcare information. As of April 2003, educational materials may not contain information or imagery from which the identity of a patient can be determined, unless said individual has given written permission.

HEAL makes a good faith effort to ensure that affiliate collections meets similar standards for resource quality, accuracy, currency, and recognition of Federal patient privacy law.

With these QA mechanisms in place, users can be confident that items in the HEAL collection have been thoroughly screened for functionality and adherence to patient confidentiality legislation. Educational value of resources is assessed using peer review criteria.

Approved resources are subject to further review where metadata may be refined by a professional librarian or content expert before they are publicly available.

7.2 Peer Review Process

As the HEAL digital library grows, it is of paramount importance to ensure its quality and to assist users with finding the best and most useful materials for their teaching and learning. A peer review process helps assure the high quality of the collection.

For details regarding the HEAL peer review process consult the Editorial Board Policy (forthcoming).

7.3 Ongoing Evaluation

To be determined.

8.0 COLLECTION DEVELOPMENT STRATEGY AND PRIORITIES

8.1 Strategy – The HEAL Federation

HEAL depends upon authors and its federation partners to share access to collections of high quality teaching resources. The value of the HEAL digital library increases with each resource and affiliate collection added to the catalog. A network of affiliate collections facilitates more rapid, diversified expansion than individual publications alone.

HEAL shares metadata with other organizations for integration with their local databases. Participation in the HEAL federation benefits all parties as the combined resources, services, and reach of the entire system add value to each individual collection.

The federation model enables HEAL users to search and view content published in both the HEAL collection as well as affiliate collections; these affiliate collections are established through partnerships with interested individuals, institutions, and professional organizations. This approach allows federation partners to exchange catalog information with the HEAL system independent of their desire to submit some or all of their multimedia content (see Figure 8A).

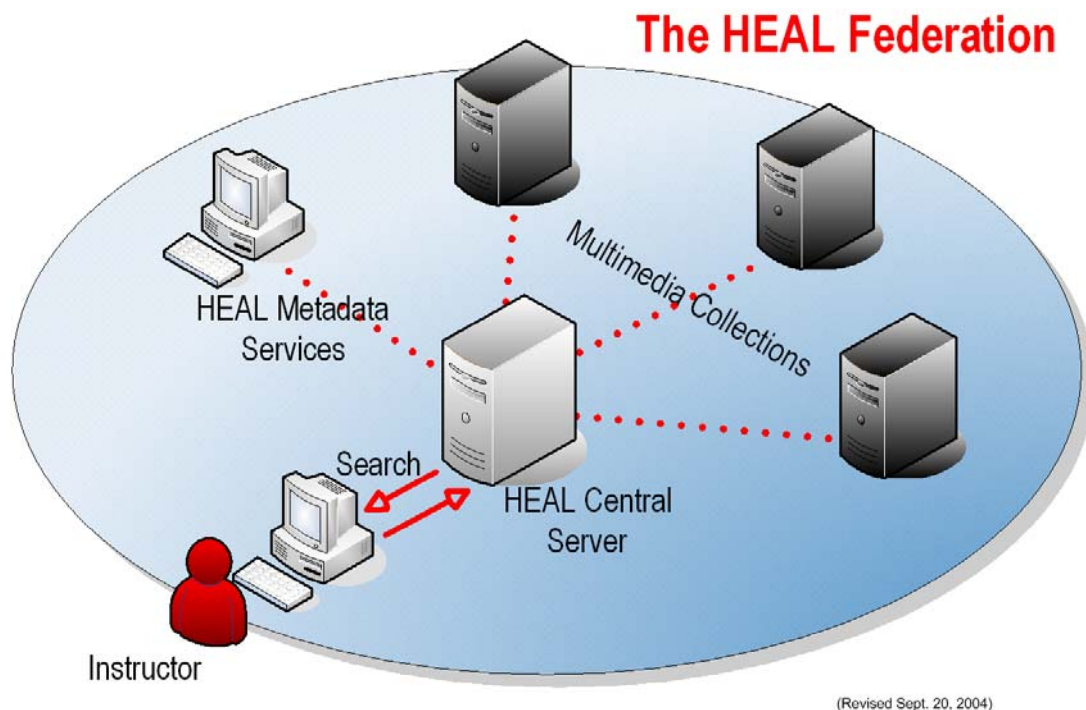


Figure 8A – The HEAL federation model.

8.2 Authors and Federation Partners

Authors submitting resources and federation partners with affiliate collections make health sciences educational resources available through HEAL and/or draw upon the catalog of HEAL metadata to provide access to other digital materials.

Authors submit their materials with appropriate metadata on the understanding that i) their materials must undergo peer review and may be accepted, conditionally accepted, or rejected for publication within the HEAL collection; ii) copyright holders retain ownership of

their resources; iii) their materials will be associated with the HEAL logo; and iv) their materials will coexist with other author publications in the HEAL collection.

In comparison, federation partners are those entities who typically share larger affiliate collections with HEAL and its users. This type of relationship may involve ongoing metadata transactions over a long time period. Federation partners typically provide metadata through mechanisms including OAI bridges and Web services, which are described below. The primary distinction between authors and federation partners is that federation partners have established systematic QA processes such as peer review and HIPAA compliance checks. After initial spot checking, and consideration and approval by the co-directors, HEAL will accept the QA mechanism of federation partners and will not require affiliate collections to undergo the HEAL editorial review process.

Table 8A below compares the similarities and differences between author and affiliate collection resources.

	Author Resources	Affiliate Collection Resources
Discoverable by HEAL Users	Yes	Yes
Associated Logo	HEAL's	Affiliate collection's
Content Ownership	Copyright holder(s) as specified in metadata	Copyright holder(s) as specified in metadata
Metadata Ownership	See section 2.0 of HEAL Metadata Policy	See section 2.0 of HEAL Metadata Policy
Content Maintenance	HEAL in consultation with author	Federation partner or HEAL depending on nature of partnership and technical method of ingestion
Metadata Maintenance	HEAL	Federation partner or HEAL depending on nature of partnership and technical method of ingestion
Method of Quality Control	HEAL triage & peer review processes	Federation partner QA process. Resources are spot checked against triage criteria.
Physical Location of Content and Metadata	HEAL server or external server	HEAL server or external server
Method of Ingestion	Any (but primarily individual submissions)	Any (but typically "bridge" development)
Assignment of Metadata	Author assigns required metadata; cataloger completes metadata upon acceptance for publication.	Existing collection metadata is used (regardless of ingestion mechanism). HEAL generates metametadata when harvesting remote collections. Rarely, depending on the ingestion mechanism, a cataloger may assign additional metadata.
Specific Examples	<ul style="list-style-type: none"> Faculty submits a single resource 	<ul style="list-style-type: none"> Digital Libraries Unrestricted commercial content Commissioned artistic works

Table 8A – Comparison of author and affiliate collection resources.

8.3 Selection of Federation Partners and Affiliate Collections

The first phase of library development has focused on the cataloging and accessioning of individual resources and smaller collections into the HEAL system. In order to achieve the development of a comprehensive and diverse collection, high quality thematic collections on a larger scale with reliable metadata will be increasingly important. The development of partnerships with federation partners and their affiliate collections will be crucial to this effort.

To expand the HEAL federation of collections, HEAL users are actively solicited to suggest affiliate collections. The co-directors make the final determination on recommended federation partnerships.

8.3.1 Requirements for Approval of a Federation Partnership

Before the HEAL co-directors formally approve a federation partnership they will ensure that sufficient QA mechanisms exist to promote quality and accuracy. In addition, the co-directors may use the following criteria in judging the overall suitability of a collection:

- Relevance Attribute – Is it appropriate to the HEAL mission?
- Web Accessible – Is it accessible via the Web?
- Cost – Is it freely available?
- Integrity Attribute – Does it function properly?
- Scientific Accuracy – Is it accurate and current?
- Importance or Significance – Does it address notable findings or advances in health sciences knowledge?
- Pedagogical Effectiveness – Is student learning promoted?
- Well-documented – Is there appropriate and sufficient accompanying documentation to facilitate its effective use?
- Ease of use for faculty and students – Is use relatively straightforward?
- Target Audience(s) – Is it designed with users in mind?
- Power to inspire or motivate students – Is presentation dynamic, engaging, or innovative?
- Robustness and/or sustainability as a digital resource – Is the contributor creditable and prepared to maintain its quality and functionality?

8.4 Priorities 2004–2005

8.4.1 Prioritization Process

Priorities for 2004–2005 will be established through the partnership between HEAL and the Association of American Medical Colleges. Specifically, the collection development process will prioritize content from all 125 U.S. and 16 Canadian medical schools in hopes of obtaining the largest possible collection of first-rate teaching materials. In order to obtain the highest quality and quantity of materials, a personal solicitation approach will be utilized that encourages faculty to publish their materials within HEAL. This approach will be supplemented by strategic pursuit of federation partners and a broad call for submissions issued through a variety of outlets.

Further details on this initiative are available in the 2004-2005 HEAL-AAMC Project Plan.

9.0 TECHNICAL OPTIONS FOR ACCESSION

There are a number of technical mechanisms by which resources enter the HEAL digital library, as is illustrated in the following diagram (Figure 9A).

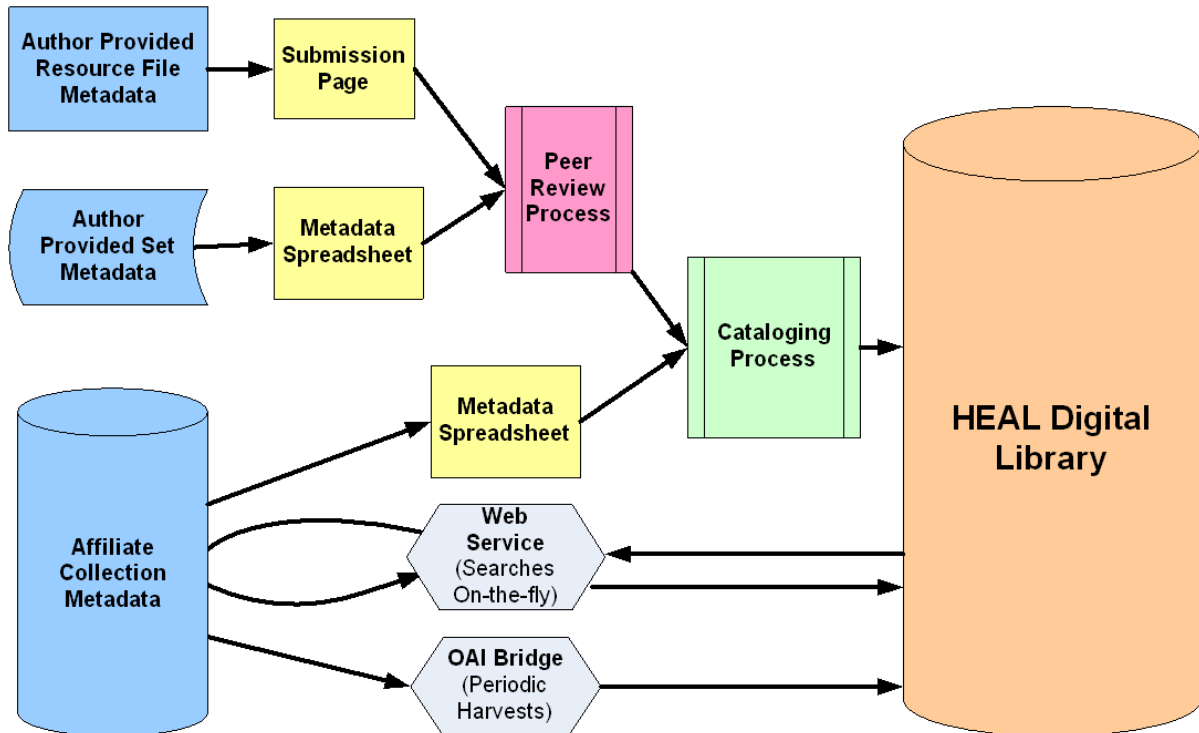


Figure 1B – Technical options for accession into HEAL.

9.1 Submission Page

Authors may submit individual or small numbers of resources through the Submission Web Page. A simple form allows them to provide basic metadata describing the resource, upload the media file, and submit it for triage, peer review, and possible publication.

9.2 Metadata Spreadsheet

Metadata imports from spreadsheet files (e.g., Excel) into the HEAL database which tend to occur on a one-time basis.

9.3 OAI Bridge

Automated mechanisms are often required when dealing with remote affiliate collections that continue to evolve or where metadata exchange is reciprocal, as opposed to individual contributions or one-time metadata imports into HEAL.

Working with the [OAI-PMH](#), HEAL has created tools for both harvesting and providing and is prepared to harvest metadata from a variety of existing large collections of health sciences multimedia. An OAI bridge enables federation partners to establish a regular schedule for harvesting metadata to ensure the accuracy, currency, and completeness of catalog information. The OAI bridge functions in both directions, allowing HEAL to effectively distribute its metadata through different venues.

9.4 Web Services

Web services are used to search the metadata of a collection on a partner's server directly, on the fly, or, conversely, provide HEAL metadata in response to queries emanating from a partner server.

10.0 REFERENCES

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11.0 APPENDICES

11.1 Appendix A – Topic Areas for Resources to Support Undergraduate Health Professional Basic and Clinical Health Sciences Education, and Continuing Professional Development

Basic Health Sciences¹

- Biochemistry
- Biostatistics and Epidemiology
- Cellular and Molecular Biology
- Embryology
- Epidemiology
- Genetics
- Gross Anatomy
- Histology
- Human Behavior
- Immunology
- Microbiology
- Neuroscience and Neuroanatomy
- Pathology
- Pathophysiology
- Pharmacology/Toxicology
- Physiology

¹Based on list at: <http://services.aamc.org/currdir/section4/start.cfm>

Clinical Sciences²:

- Addiction Psychiatry
- Adolescent Medicine
- Aerospace Medicine
- Allergy & Immunology
- Anatomic Pathology
- Anesthesiology
- Blood Banking/Transfusion Medicine
- Cardiology
- Chemical Pathology
- Child & Adolescent Psychiatry
- Clinical & Laboratory Dermatological Immunology
- Clinical & Laboratory Immunology
- Clinical Biochemical Genetics
- Clinical Cardiac Electrophysiology
- Clinical Cytogenetics
- Clinical Genetics
- Clinical Molecular Genetics
- Clinical Neurophysiology
- Clinical Pathology
- Colon & Rectal Surgery
- Critical Care Medicine

- Cytopathology
- Dermatology
- Dermatopathology
- Developmental-Behavioral Pediatrics
- Diagnostic Radiology
- Emergency Medicine
- Endocrinology, Diabetes & Metabolism
- Family Practice
- Forensic Pathology
- Forensic Psychiatry
- Gastroenterology
- Geriatric Medicine
- Geriatric Psychiatry
- Hematology
- Infectious Disease
- Internal Medicine
- Interventional Cardiology
- Maternal & Fetal Medicine Reproductive Endocrinology
- Medical Genetics
- Medical Microbiology
- Medical Oncology
- Medical Toxicology
- Molecular Genetic Pathology
- Neonatal-Perinatal Medicine
- Nephrology
- Neurodevelopmental Disabilities
- Neurological Surgery
- Neurology
- Neuropathology
- Neuroradiology
- Neurotology
- Nuclear Medicine
- Nuclear Radiology
- Obstetrics & Gynecology
- Occupational Medicine
- Ophthalmology
- Orthopedic Sports Medicine
- Orthopedic Surgery
- Otolaryngology
- Pain Medicine
- Pathology
- Pediatric Cardiology
- Pediatric Critical Care Medicine
- Pediatric Dermatology
- Pediatric Emergency Medicine
- Pediatric Endocrinology
- Pediatric Gastroenterology
- Pediatric Hematology-Oncology
- Pediatric Infectious Diseases
- Pediatric Nephrology
- Pediatric Otolaryngology
- Pediatric Pathology
- Pediatric Pulmonology

- Pediatric Radiology
- Pediatric Rehabilitation Medicine
- Pediatric Rheumatology
- Pediatric Surgery
- Pediatrics
- Physical Medicine & Rehabilitation
- Plastic Surgery
- Plastic Surgery within the Head and Neck
- Preventive Medicine
- Psychiatry
- Psychosomatic Medicine
- Public Health
- Pulmonology
- Radiation Oncology
- Radiological Physics
- Radiology
- Rheumatology
- Spinal Cord Injury Medicine
- Sports Medicine
- Surgery of the Hand
- Surgical Critical Care
- Thoracic Surgery
- Undersea & Hyperbaric Medicine
- Urology
- Vascular & Interventional Radiology
- Vascular Neurology
- Vascular Surgery

²Approved ABMS specialty boards & certificate categories:
<http://www.abms.org/approved.asp>

Interdisciplinary Topics³

- Alternative and Complementary Medicine
- Biological/Chemical Terrorism
- Biostatistics
- Communication Skills
- Community Health
- Cultural Diversity
- End of Life Care
- Epidemiology
- Evidence Based Medicine
- Family/Domestic Violence
- Genetic Counseling
- Geriatrics
- Health Care Quality Improvement
- Health Care Systems
- Health Literacy
- Home Health Care
- Human Development/Life Cycle
- Human Sexuality
- Medical Ethics

- Medical Humanities
- Medical Informatics
- Medical Jurisprudence
- Medical Socioeconomics
- Nutrition
- Occupational Medicine
- Pain Management
- Palliative Care
- Patient Health Education
- Population-based Medicine
- Practice Management
- Preventative & Health Maintenance
- Research Methods
- Substance Abuse
- Termination of Pregnancy

³From LCME Hot Topic List:

<http://services.aamc.org/currdir/section2/LCMEHotTopics.pdf>

Other Topics

- Patient Safety
- Procedural Skills

11.2 Appendix B – Topic Areas for Resources to Support Consumer and Patient Health Education*

- Arthritis, Osteoporosis, and Chronic Back Pain
- Cancer
- Chronic Kidney Disease
- Diabetes
- Family Planning
- Fitness
- Food Safety
- Heart Disease and Stroke
- HIV and AIDS
- Immunization and Infectious Diseases
- Maternal, Infant, and Child Health
- Mental Health
- Nutrition and Obesity
- Oral Health
- Respiratory Health and Tobacco Use
- Sexually Transmitted Diseases
- Substance Abuse
- Vision and Hearing

*From *Healthy People 2010*: <http://www.health.gov/healthypeople>.