

Analyzing a Unique Controlled Vocabulary: Chiropractic Subject Headings—Past, Present and Future

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In this paper, the author attempts to analyze a distinct library controlled vocabulary, Chiropractic Subject Headings (ChiroSH), in the greater context of the history of medical literature and medical subject headings, the history of chiropractic clinical practice and chiropractic literature, and its use in the Index to Chiropractic Literature (ICL) in particular. Using a variety of sources including journal articles and interviews with ICL indexers, chiropractic librarians, and the current editors of ChiroSH, the author intends to demonstrate the value in developing specialized controlled vocabularies for areas of medical knowledge that go beyond the scope of MeSH, to ultimately enhance the research of students, faculty, practitioners, and the curious.

The Development of Medical Subject Headings (MeSH)

Medical advancements of the 20th century revolutionized the world of written knowledge. The proliferation of medical literature along with existing problems in using the old forms of medical bibliography necessitated the creation of a new controlled vocabulary for medical works, a process that began with a Symposium on Medical Subject Headings in 1947. Concurrent with this development was the desire to make bibliographic records machine-readable and retrievable.¹ In 1960, the National Library of Medicine (NLM) published the first Medical Subject Headings (MeSH) list.¹ Departing from the standard of the time, MeSH creators formatted the list to be used by both catalogers describing books and indexers describing journal articles. That first version contained 4,300 terms specifically covering topics of medicine, dentistry, nursing, allied health, alternative medicine and preclinical stud-

ies.² Because of its broad range, the new controlled vocabulary allowed for in-depth subject analysis of medical literature unlike any of its time and provided more accurate access points to the widening variety of specialized information in the medical field.

MeSH: Purpose and Uses

MeSH was specifically formed for both catalogers and indexers at the National Library of Medicine, but it has grown since to be the accepted vocabulary used by medical libraries worldwide.² By indexing over 4,600 biomedical journals, books, and other sources from the start, the NLM's Medical Subject Headings met the needs of medical research libraries whose collections held materials better classified under medical terms than the interdisciplinary terms of the Library of Congress Subject Headings (LCSH). As Jacque-Lynne Schulman's (2010) "History of MeSH" states:

The 2010 edition contains more than 25,000 subject headings in an eleven-level hierarchy and 83 subheadings. Annual revision and

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updating are ongoing to assure that MeSH remains useful as a way to categorize medical knowledge and knowledge in allied and related disciplines.¹

However, with sustained growth in medical knowledge and increasing specialization among practitioners, was this list going to be enough? Eventually, specific disciplines developed in the medical profession, and individual colleges and universities catering to specialized areas of medical knowledge began to develop expansive library collections and to index subject specific databases that could no longer adequately be categorized by even the NLM's standards alone.

MeSH and Complementary and Alternative Medicine

MeSH headings are particularly inadequate for small, discipline-specific collections and for indexing literature of more specialized medical fields. One large field that Medical Subject Headings tend to simplify is Alternative and Complementary Medicine. Perhaps this is a result of bias against a perceived outlier in the medical community, or maybe this is due to the fact that MeSH is in general fairly simplified.² Written by the NLM (2012), the official scope note of the MeSH term "Complementary Therapies" (which describes the parameters of the heading under which "Manipulation, Chiropractic" eventually falls), states:

Therapeutic practices which are not currently considered an integral part of conventional allopathic medical practice. They may lack biomedical explanations but as they become better researched some (physical therapy, therapy modalities, diet, acupuncture) become widely accepted whereas others (humors, radium therapy) quietly fade away, yet are important historical footnotes. Therapies are termed as Complementary when used in addition to conventional treatments and as Alternative when used instead of conventional treatment.³

Because of the stigma surrounding alternative and complementary treatment, it is not surprising that chiropractic would be given a few basic terms in the Medical Subject Headings List. One would be led to believe that there is not enough literature to merit more specific terms for more in-depth subject analysis—but, this is far from the truth. Chiropractic, a discipline falling under the larger heading of alternative and complementary medicine, is one such field where literature abounds, but adequate descriptors of subject could not be found in any official list. In fact, this remained the case until the Chiropractic Library Consortium (CLIBCON) released the first edition of Chiropractic Subject Headings in 1984. In order to understand how ChiroSH developed, one must first understand the history of the world from which it emerged.

The Development of Chiropractic Subject Headings (ChiroSH)

According to author J.K. Simpson, the history of the chiropractic discipline can be divided into five distinct periods. These are the Era of Free trade in Medicine (1860-1900), the Era of Prosecution (1900-1950), the Era of Persecution (1920-2000), the Era of Legitimization (1960-present), and the Era of Opportunity (2000-present). Of particular interest is the Era of Legitimization, which was characterized by a move toward establishing credibility among medical professionals through a variety of methods.⁴ The movement included conversations amongst leading editors of numerous chiropractic journals about developing standards for reviewing and indexing literature and efforts by librarians to unify the existing body of literature for the profession.⁵

In the early 1970s, the chiropractic profession began to develop a large body of discipline-specific literature, and the few existing related MeSH terms like

“Chiropractic” (referring to the occupation), “Manipulation, Chiropractic,” and “Spinal Adjustment, Chiropractic” no longer sufficiently described the growing field of written knowledge. In addition, the few terms were inadequate to serve the purpose of being able to describe the literature’s “about-ness,” rendering the material relatively unsearchable. In her 2008 article on the history of the Index to Chiropractic Literature, Phyllis Harvey, librarian at Palmer College of Chiropractic, notes that it was during the 1970s that chiropractic librarians began to communicate and plan ways to “make their libraries and resources better for their chiropractic student and faculty users.”⁶, p.83 Nine chiropractic librarians met at Palmer College of Chiropractic in 1979 and formed the Chiropractic Library Consortium, today Chiropractic Library Collaborative (CLC). Most notably, CLIBCON developed an index of all major chiropractic journals, later named the Index to Chiropractic Literature (ICL) and a separate headings list modeled after MeSH known as Chiropractic Subject Headings (ChiroSH). The ICL was first released in 1982, and the first version of ChiroSH in 1984.⁶

ChiroSH was originally drafted from a combination of subject authority files at various chiropractic institutions. In particular, the editors used data from Texas Chiropractic College and Northwestern College of Chiropractic, the subject thesaurus from the first volume of Chiropractic Research Abstracts Collection (CRAC), and the subject lists from the Index to Chiropractic Literature (Chiropractic Library Collaboration, 2009). The first list was also produced in consultation with doctors of chiropractic from Texas Chiropractic College.⁷ Later on in the development of ChiroSH, editors of major chiropractic journals who participated in the Chiropractic Research Journal Editor’s Council noted the work that CLIB-

CON was doing in this direction and became involved in the collaborative effort to finalize a universal chiropractic subject headings list.⁸

ChiroSH’s original purpose was two-fold. As CLIBCON’s *Preface to the First Edition* (1984) states:

The long-range aim of the CHIROPRACTIC SUBJECT HEADINGS is to bring some standardization to the use of chiropractic terms in libraries. Its immediate aim is to bring standardization to the chiropractic terms that will be assigned each record that will be added to the CHIROPRACTIC UNION CATALOG OF MONOGRAPHS.

As a more immediate goal, it sought to bring standardization to the chiropractic terms used in the Chiropractic Union Catalog of Monographs (CHUCOM), which was a two volume work compiled and edited by Mara Umpierre, the Director of Library Services at Texas Chiropractic College, and published in Portland, Oregon, in 1986 by the Chiropractic Library Consortium. The second goal for ChiroSH is yet to be realized—that all chiropractic libraries would use the same list of terms for their own collections.

With that goal of bringing standardization to the use of chiropractic terms in libraries in mind, the list was also created with the plan for future editions. As one of the original editors wrote, “This edition is by no means a final authoritative thesaurus. Like all attempts, there will be room for improvement.”⁷ In fact, in the CLIBCON’s (1986) *Preface to the Third Edition* editor Mara Umpierre notes that errors from the previous editions were corrected and a number of new headings were added. These edits took place within two years of the first edition’s publication in collaboration with Canadian Memorial College, Northwestern College of Chiropractic, and Western States Chiropractic College (today, University of Western States). Today, ChiroSH is in its sixth edition.

It should also be noted that Chiropractic Subject Headings were created to be used in conjunction with MeSH, not as a total replacement. The *Preface to the First Edition* (1984) notes that chiropractic terms possessing a MeSH equivalent were notated with a reference to the corresponding MeSH term. The *Preface to the Third Edition* (1986) states, "The symbols used in this thesaurus are the same symbols used in the *Medical Subject Headings* (MeSH) of the National Library of Medicine. This will facilitate the concurrent use of both thesauri." The latest edition of ChiroSH further mentions that though they are based on MeSH headings, most of the "ChiroSH headings are unique to this thesaurus. Chiropractic terms with established medical headings are provided with "See" references to direct users to MeSH, where they will find scope notes, accepted subheadings (qualifiers), and cross references."⁹(p. 3)

ChiroSH: Current Uses

ChiroSH has become a dynamic resource for librarians and indexers of chiropractic literature. Current editors Ann Kempke, Technical Services Librarian at Northwestern Health Sciences University, and Bethyn Boni, Library Director at New York Chiropractic College, continue the work that began more than twenty-five years ago. Various library directors and librarians had worked on ChiroSH over the years, but, as it was an extra in their workload, it was never a priority project for chiropractic librarians. Boni became involved with ChiroSH when she joined the Subject Headings Committee in 2004, and she currently serves as an editor. Kempke serves as the primary editor. Her involvement began ten years ago when Phyllis Harvey, Palmer librarian and ICL editor since 2002, asked her to consider compiling a new version of the thesaurus. A new edition was many years overdue at the time Kempke joined the project

as the Subject Headings Committee chair (B. Boni & A. Kempke, personal communication, April 19, 2012). The sixth edition of ChiroSH was released in 2009, and it is available as a PDF through the Index to Chiropractic Literature website.

As co-editors, the process for editing the subject heading list is fairly straightforward. Both editors correspond via email to propose the addition of new headings. Their conversations include discussing ideas, looking things up, emailing back and forth, and then creating new headings as needed. The master document is kept with Kempke at Northwestern Health Sciences University. As primary editor, Kempke also conducts subject-heading clean up. She locates incorrect headings that have been added to citations in the Index to Chiropractic Literature. Through her involvement in ICL as a committee member and indexer for two journals, she builds familiarity with chiropractic literature and terms used. When she finds the occasional non-MeSH or non-ChiroSH headings that were entered into the system in the past, she will update it, or if she thinks the heading has merit as a ChiroSH heading, she will submit it to Boni for review (B. Boni & A. Kempke, personal communication, April 19, 2012).

The editing process involves input from outside sources as well. Indexers and site users can submit suggestions through the ICL webpage. For adding new terms to ChiroSH, Kempke and Boni generally accept proposals from those involved indexing chiropractic literature. As new terminology emerges in the chiropractic profession (i.e., new techniques), they review the new topic, search for already existing terminology, and then create headings as needed in the designated MeSH format. They also, on occasion, create appropriate new terms for older literature. As Kempke noted, "I have to admit that

when I go through things in my library's archives, I sometimes find really old books in need of appropriate headings. So not only do we construct headings for current needs, but for old ones that were never met" (B. Boni & A. Kempke, personal communication, April 19, 2012).

When the Chiropractic Subject Headings list is updated, such as in 2009, indexing is impacted, although minimally. The current editors noted that major changes would hopefully not be taking place to the existing terms, but rather, new terms would be based on and come from new literature. However, because the ICL allows editors to make changes globally, the process for adapting the database to reflect the updates has not been difficult (B. Boni & A. Kempke, personal communication, April 19, 2012). As a more specialized set of terms, the list would ultimately aid in the indexing of chiropractic literature, and consequently greatly benefit all chiropractic researchers.

The Index to Chiropractic Literature (ICL)

Though the Chiropractic Subject Headings were originally slated for use in a printed catalog of books, they were used in reality for a much different and longer lasting purpose—as the terms used in the Index to Chiropractic Literature. According to the Chiropractic Library Collaboration, "The primary goal of the *Index to Chiropractic Literature* is to provide indexing of the peer-reviewed literature produced by chiropractic publishers....ICL provides full bibliographic records, and abstracts are reproduced with publishers' permissions."¹⁰ The ChiroSH editors, as previously noted, are currently involved with the ICL as members of the Subject Headings Committee and the Indexing Committee. Kempke, who serves on the Indexing Committee, stated, "We're active when some decision

needs to be made about ICL--feature changes/additions to enhance the database, help files to edit/add, marketing ideas/materials to share, etc. I also index two journals for the database: Chiropractic History and Journal of Clinical Chiropractic Pediatrics" (B. Boni & A. Kempke, personal communication, April 19, 2012). Their involvement with the ICL ensures that ChiroSH reflects current literature and terminology in the chiropractic profession.

ChiroSH: Whom Does It Really Benefit?

Because of its use in the Index to Chiropractic Literature, ChiroSH benefits many parties. Keeping students, faculty, and researchers in mind, the librarians who edit ChiroSH and index the ICL strive to use standard, current terminology of the chiropractic field. ChiroSH directly benefits indexers and librarians because it provides them with a widely used standard for describing the literature. It benefits Doctor of Chiropractic (DC) students, chiropractors, and the interested public because the subject heading terms make the literature organized and searchable. In talking about the ICL as a valuable resource, the current ChiroSH editors noted, "Anyone who wishes to learn about Chiropractic benefits. This [ICL] is one of the only privately owned and managed 'free to search' resources left. Any and everyone is welcome to search the ICL" (B. Boni & A. Kempke, personal communication, April 19, 2012).

In 2008, ChiroSH became an even greater resource for chiropractic librarians because it became an approved list by the Library of Congress. Prior to its acceptance, librarians could not load chiropractic subject headings into original bibliographic records. Because ChiroSH was a well-developed headings list, was already published on the ICL website, and was widely distributed to chiropractic librarians

at that point, Janet Tapper, University Librarian at University of Western States, called the Library of Congress (LC), got the e-mail address of who would review the thesaurus, and submitted ChiroSH for approval. Four months later, it became an approved Library of Congress headings list, and the Online Computer Library Center (OCLC) accepted it shortly after (J. Tapper, personal communication, April 24, 2012).

Evidence of ChiroSH's value for students can be seen through the inclusion of the Index to Chiropractic Literature in Doctor of Chiropractic Information Literacy Courses at chiropractic colleges (Harvey & Goodell, 2008). In recent years, many chiropractic education institutions have taken steps toward training in evidence-based clinical practice. According to the Institute of Evidence-Based Chiropractic (IEBC):

Evidence-based chiropractic promotes the synthesis and application of the most reliable research-derived evidence when making clinical decisions. While research information is an important component in the health care decision making process, it should be used in conjunction with clinical experience and judgment, clinical circumstances, and preferences of the patient.¹¹

In schools with a program emphasis on evidence-based clinical practice, having searchable, accessible information is key. What better resource for practicing evidence-based chiropractic than a database exclusively devoted to indexing current chiropractic literature? Today, researchers can stay up-to-date by browsing the most recent journal issues in the ICL or by subscribing to journal RSS feeds and following the ICL on social media sites such as Facebook and Twitter. Though designed perhaps primarily with DC students, faculty and practicing chiropractors in mind, the ICL is accessible to the general public, and thus, can serve all of

society. Because of the way the ChiroSH helps make the ICL searchable and usable, it really benefits all.

ChiroSH in the Future: Some Conclusions

Though the long-range goal for ChiroSH is to bring standardization to chiropractic terms used in libraries, this goal has not yet been realized. Of the twenty member institutions in the Association of Chiropractic Colleges, none use ChiroSH as the primary subject headings list in their catalogs. However, the acceptance of ChiroSH by the Library of Congress and OCLC was a step in this direction and certainly helpful to catalogers in chiropractic libraries who desired to include these descriptors in their MARC records. Some chiropractic libraries use their own local listing of chiropractic terms modeled after LCSH and some use a hybrid of MeSH and LCSH. Other libraries that are members of a library consortium have to abide by the groups' OPAC format.

In conclusion, it can be seen that the primary use of ChiroSH today is for indexing the Chiropractic Library Collaboration's Index to Chiropractic Literature. By looking at the development of ChiroSH from its early stages in the 1980s to the sophisticated, Library of Congress-approved, and widely accepted subject headings list it is today, one can see that the chiropractic profession is a growing, viable, medical profession. However, it is the possibilities for the future of ChiroSH as a resource beyond its current use in the Index for Chiropractic Literature, which is the long-term goal stated in the original version of ChiroSH, that truly make the future of the chiropractic library profession exciting.

Notes

- 1 Schulman, J. (March 25, 2010). History of MeSH. U.S. National Library of Medicine. Retrieved from http://www.nlm.nih.gov/mesh/mesh_at_50/history_of_mesh.html
- 2 Machado, C.K. (2003, Winter). Just MeSHing around! MeSH and LCSH in Rowland Medical Library's catalog. *Mississippi Libraries*, 67(4), 116-119.
- 3 U.S. National Library of Medicine. (2012). MeSH Descriptor Data for MeSH Heading "Complementary Therapies." Retrieved from http://www.nlm.nih.gov/cgi/mesh/2014/MB_cgi?mode=&term=Complementary+Therapies&field=entry#TreeE02.190
- 4 Simpson, J.K. (2012). The five eras of chiropractic & the future of chiropractic as seen through the eyes of a participant observer. *Chiropractic & Manual Therapies*, 20 (1), 1-8.
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- 6 Harvey, P.J. (2008). Index to chiropractic literature: Twenty-five years of progress. *Chiropractic History*, 28(1), 83-93.
- 7 Chiropractic Library Consortium. (1984). *Preface to the first edition*. Jones, C. (Ed.)
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- 9 Chiropractic Library Collaboration. (2009). *Chiropractic subject headings* (6th ed.). Kempke, A. & Boni, B. (Eds.).
- 10 Chiropractic Library Collaboration. (2012). *Index to Chiropractic Literature: About us*. Retrieved from <http://www.chiroindex.org/about/>
- 11 Institute of Evidence-Based Chiropractic. (n.d.) Providing direction for practitioners. Retrieved from <http://www.chiroevidence.com/index.html>

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13 SEPTEMBER 2014

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