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## BRIEF COMMUNICATIONS

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### **A comparison of CINAHL and MEDLINE CD-ROM in four allied health areas\***

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#### INTRODUCTION

Ferris State University offers both two-year and four-year degrees in many allied health fields. Because both the *Cumulative Index to Nursing and Allied Health Literature (CINAHL)* and MEDLINE on SilverPlatter CD-ROM were available for faculty and student use, questions were raised concerning overlap, coverage, and choice of database. The four allied health areas covered by CINAHL in which Ferris had degree programs were medical or laboratory technology, medical records, radiologic technology, and respiratory therapy. CINAHL and MEDLINE were compared in these four areas.

#### METHODOLOGY

Three methods were used for assessing the differences in CINAHL and MEDLINE in the four selected allied health fields. The first method was a journal title comparison using the journal list from Brandon and Hill's "Selected List of Books and Journals in Allied Health Sciences" [1-3]. The topics from the journal list that coincided with four fields in the study were allied health, diagnostic medical sonography, hematology, medical records, medical technology, nuclear medicine technology, radiologic technology, and respiratory therapy. The journal titles from these areas were checked against both databases. The 1991 *Cumulative Index to Nursing and Allied Health Literature* paper index and the 1991 *NLM Journals Indexed* were

used to confirm if a title was included in either CINAHL or MEDLINE. Ancillary journals were counted equally with the regular journals indexed.

The second method of assessment was a journal preference survey given to the eighteen full-time faculty teaching in the four targeted areas [4]. Faculty members were asked to pick the top five (or fewer) journals that they felt were most important for keeping informed in their area. It was distributed during the summer of 1991; seventeen faculty members returned their survey for a 94% response rate.

The third method was a literature search opinion survey given to the faculty after they searched both databases [5]. Ten faculty members searched one topic of their choice within their area on both systems. After they completed both searches, they answered seventeen questions. At least one faculty member represented each of the four allied health fields. The databases were searched in alternating order, and each faculty member was told to print out all relevant articles, including duplicates found on the other database. The same librarian was present to answer any questions, to urge them to use the thesaurus of subject headings, and to time the length of their searches. Use of the same search terms for both databases was encouraged, and searching was confined to the years 1988 to 1990.

#### RESULTS

Table 1 shows the forty-three journals cited by the faculty as most important for keeping up with the literature in their fields. As expected, not all of these titles were specifically allied health journals. The journals are ranked by the number of faculty references each received, and their appearance in each database is noted.

The results of the literature search opinion survey showed that 30% (three) of the faculty preferred to search CINAHL first, 60% (six) said database choice depended on the search, and 10% (one) had no preference. Nine of the respondents said both databases should be used for a literature search, and one said only CINAHL was necessary. All who answered felt that the thesaurus on disk was highly useful.

CINAHL differed from MEDLINE in that it had only English articles and fewer abstracts. However, these factors did not seem very important to the faculty: 90% (nine) were interested in English articles only, and 60% (six) felt the lack of abstracts was not limiting.

When asked how often they would use each CD-ROM (on a scale from 1, for never, to 5, for frequently), the mean for MEDLINE was 3.5 and for CINAHL 3.6. When asked about having their students

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\* Based on a poster presented May 20, 1992, at the Ninety-second Annual Meeting of the Medical Library Association in Washington, D.C.

do literature searches, two said they would prefer their students to use CINAHL, and eight said they would prefer their students to search both databases. Nine (90%) of the respondents said they would like the library to own both databases, with one preferring CINAHL. Four said they would prefer to do all their own searches, while six said they would like to do some themselves. No one said they would like all of their searching done by a librarian. The mean time spent for a MEDLINE search was forty-five minutes, and the mean time for a CINAHL search was twenty-one minutes. It should be noted that all three years of CINAHL were on one disk, while MEDLINE required a different disk for each year searched. Even so, the mean rating for ease of use for each database was 4.5 out of 5, 1 being difficult and 5 being easy.

A mean of 26 citations were printed from the MEDLINE searches, and a mean of nine citations were printed from the CINAHL searches. In the ten searches by faculty members, nine duplications were found out of 347 printed citations, for a 2.6% overlap. When relevant citations were checked against the other database to see if the citation existed but wasn't found due to differences in indexing, 46 more duplicate records were found. This increased the overlap to 55 citations out of 393, for a total of 14%.

## DISCUSSION AND CONCLUSIONS

The two journal title comparison methods showed that both CINAHL and MEDLINE on CD-ROM would be useful in searching the four targeted allied health fields. CINAHL had a higher percentage of allied health titles from the Brandon/Hill list, but both databases were highly rated in the journal preference survey. The total overlap for the Brandon and Hill comparison was only 11%, and the overlap on the faculty journal survey was 30%. These low percentages supported the overwhelming opinion of the faculty that both databases needed to be searched and showed that each database covered unique journals.

Although the results from the literature search opinion survey were subjective and general conclusions could not be drawn, the responses provided important information on how each system was viewed by actual end users. Surveys like this could be invaluable in providing justification for purchase or retention of a useful technology or product. The study also was a unique way to introduce faculty to a new product. Although the mean number of citations retrieved was higher for MEDLINE than for CINAHL, the majority of the respondents felt that both CD-ROM databases were easy to use, should be used by students and faculty, and should be owned by the library. This opinion was supported by the low rate of overlap among citations retrieved from the two databases.

**Table 1**  
Faculty-cited journals by number of references

References	Journal title	MEDLINE	CINAHL
7	<i>JAMA</i>	x	x
5	<i>Radiologic Technology</i> *§	x	x
5	<i>New England Journal of Medicine</i> ‡	x	x
4	<i>Administrative Radiology</i>		
4	<i>Journal of the American Health Information Management Association</i> *†		x
3	<i>Respiratory Care</i> *†		x
3	<i>Journal of Nuclear Medicine</i>	x	
3	<i>Journal of Nuclear Medicine Technology</i> *§		
3	<i>Chest</i>	x	x
3	<i>Applied Radiology</i> *†		x
2	<i>Laboratory Medicine</i> *‡		x
2	<i>Hospitals</i> §	x	x
2	<i>Clinical Laboratory Science</i> *		
2	<i>Topics in Health Records Management</i> *†§		x
2	<i>American Journal of Clinical Pathology</i>	x	
2	<i>Blood</i>	x	
1	<i>Journal of Clinical Microbiology</i> ‡	x	x
1	<i>Transfusion</i> *	x	
1	<i>Computers in Health Care</i> ‡		x
1	<i>JCAHO Perspectives</i> ‡		
1	<i>Journal of Infectious Disease</i> ‡	x	x
1	<i>RT Image</i>		
1	<i>RT—Journal of Respiratory Care Practitioners</i>		
1	<i>American Association of Respiratory Care Times</i> *†§		x
1	<i>American Review of Respiratory Disease</i> ‡	x	x
1	<i>Clinical Chemistry</i> *	x	
1	<i>Health Care Supervisor</i> §		x
1	<i>Hospital Topics</i> §		x
1	<i>The Office</i>		
1	<i>Radiology Management</i>		
1	<i>Choices In Respiratory Management</i> *†		x
1	<i>Seminars in Nuclear Medicine</i>	x	
1	<i>European Journal of Nuclear Medicine</i>	x	
1	<i>Health Physics Society Journal</i> ‡	x	x
1	<i>Heart &amp; Lung</i>	x	x
1	<i>In Health</i>		
1	<i>Infection and Immunity</i>	x	
1	<i>RN</i>	x	x
1	<i>Vox Sanguinis</i>	x	
1	<i>Antimicrobial Agents and Chemotherapy</i> ‡	x	x
1	<i>Medical Laboratory Observer</i> *†		x
1	<i>Nursing</i>	x	x
1	<i>Seminars in Hematology</i>	x	
Totals (%)**††		23 (53%)	25 (58%)

\* Also on Brandon/Hill list for allied health sciences.

† On Allied Health Subset.

‡ Ancillary Journal.

§ Selectively indexed.

\*\* Overlap = 13/43 (30%).

†† Total journals covered by both indexes = 35/43 (81%).

Comparisons could not be made between searches because most of the faculty members were inexperienced searchers and each used a different topic. However, the use of different questions allowed for a broad range of topics to be tested for overlap and duplication. Because these databases are to be used by nonlibrarians, the faculty search results and comments can be used in developing instructional materials.

The study clearly indicated that in the four specified allied health areas both CINAHL and MEDLINE on CD-ROM were valuable indexing tools. Each database covered unique journal titles and yielded unique relevant citations.

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## REFERENCES

1. FOREMAN GE. Journal coverage in the nursing indexes: *International Nursing Index* and *Cumulative Index to Nursing and Allied Health Literature*. *Med Ref Serv Q* 1983 spring; 2(1):1-6.
2. CALDWELL J, ELLINGSON C. A comparison of overlap: ERIC and Psychological Abstracts. *Database* 1979 Jun;2(2):62-7.
3. BRANDON AN, HILL DR. Selected list of books and journals in allied health sciences. *Bull Med Libr Assoc* 1990 Jul; 78(3):233-51.
4. BROOKS K. A comparison of the coverage of agricultural and forestry literature on Agricola, Biosis, CAB, and SciSearch. *Database* 1980 Mar;3(1):39-49.
5. BONHAM MD, NELSON LL. An evaluation of four end-user systems for searching MEDLINE. *Bull Med Libr Assoc* 1988 Apr;76(2):171-80.

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## Work sampling in a one-person library

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## INTRODUCTION

Guy St Clair, a past president of the Special Libraries Association, notes that the distinction between professional and clerical tasks in a library is made only within the profession and not at the management level that determines whether the organization's information requirements can be met by one person. Thus, he avers, "when there is only one person to do the work the distinction between clerical and professional is really no longer relevant" [1]. By exten-

sion, the same philosophy presumably applies to the library with a staff of only half of a full-time equivalent (FTE). The distinction, however, is not so easily ignored during periods of growth, when management concludes that more human resources must be devoted to the library. The easiest thing to do in a half-FTE library is to make the librarian's position full-time.

This is a hard offer for the librarian to refuse. But it may not be the optimal solution when improvement or expansion of service is desired. If services are not offered or are unsatisfactory due primarily to lack of clerical support, it is not obvious whether the situation is better remedied by an expansion of the librarian's hours or by the addition of support FTE.

To find an answer, a librarian needs more than an impressionistic view of how time is spent. The librarian, however, may be much too busy to produce an accurate recording of activities at predetermined random times, as required by standard time-study methods. Nor is it self-evident that the impression of experienced colleagues at other hospitals necessarily will apply to this particular librarian's environment, where equipment, space, storage arrangements, established services, and volunteer hours may be unique.

An appropriate solution may be found readily in the literature. Between 1968 and 1980, there were several articles describing time studies that used a wearable random alarm clock [2-7]. This device produces a beep at random intervals, and activity in progress may be recorded each time the beep is heard. The author's efforts to find this device were unsuccessful. However, this paper describes use of a similar technique to sample work patterns at a small, northern California hospital library.

## METHOD

The method chosen for the study was "quasi random" sampling as described by Line; this technique involves selecting, for example, every *n*th person in a population, with the first person chosen at random [8]. The timer used was a small clip-on device commonly found at hardware or kitchen supply stores. For practical reasons, it was impossible to reset the timer throughout the day according to a random number list, but it was relatively easy and quick to reset for one-hour intervals. A random number table was used to select a number between one and sixty for each day of the fifty-day study. At the start of work each day, this number was added to the current time to set the time at which the day's first observation would be recorded.

For example, if one were ready to start work at 8:33 A.M., and the selected number were 11, the time for the first observation would be 8:44, and a setting of