Physical therapists in private practice: information sources and information needs

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Increasing numbers of physical therapists are providing evaluation and therapy in their own private-practice clinics. Their move out of the hospital setting has reduced their access to the sources of information designed to support clinical and practice-management decision making. The author designed a survey to determine how often physical therapists in private practice in Vermont use seven sources of information for clinical and practice-management decision making. Survey respondents also were asked to rate the anticipated usefulness of a variety of health sciences library information and research services not currently available to them and to rank access paths to information according to their preferences. The therapists' responses show frequent reliance on personal and office collections of professional literature for clinical decision making but virtually no use of bibliographic databases. Respondents ranked document-delivery services and mediated searches as having the greatest anticipated usefulness for clinical decision making. The limitations of their current information-seeking behavior and their high level of interest in increased access to a wide range of information and research services make physical therapists in private practice of special interest to health sciences librarians who are planning outreach programs.

INTRODUCTION

The practice of physical therapy in the United States has changed dramatically during the last ten years. Physical therapists increasingly are moving out of institutional settings such as hospitals and into their own private-practice clinics. Because of changes in state laws, physical therapists are no longer merely treatment providers; now, independent of physician referral, they are evaluating patients and planning therapeutic programs as well as providing treatment. Ten years ago, only three states allowed physical therapists this level of independence in practice, now known as "total direct access." The American Physical Therapy Association (APTA) reports that as of May 1994, thirty states allow total direct access; seven states require physician referral for all physical therapy services; and thirteen states allow "partial direct access," meaning that without physician referral, physical therapists may evaluate but not treat (Figure 1).

In Physical Therapy Practice Without Referral, the APTA states that the responsibility of the physical therapist is limited to identifying problems of movement dysfunction and treating them using physical measures [1]. In the private-practice setting, physical therapists must exercise professional judgment and independent thinking and be competent to practice without physician guidance and supervision. Several physical therapists have stressed the importance of applying published research to clinical problem solving, with some advocating frequent reading of the professional literature, especially for those practicing independently [2–7]. A study by Schafer showed that top-level managers of those private physical therapy practices with the highest net incomes and the most employees closely track their business environments, particularly changes in the technological environment [8]. These managers place great importance on tracking research trends, new information technology, new product development, and improvements in existing products and materials development.

Unfortunately, the professional literature, at one
time easily available to physical therapists through their hospital libraries and DOCLINE, is usually inaccessible to those practicing independently. GRATEFUL MED and LOANSOME DOC, while available, seem to be either unknown to or unused by this group. Furthermore, few physical therapists in private practice have access to the collections or information services routinely provided to their colleagues in hospital and academic settings by health sciences librarians. Aiken recognized this in 1979 when she addressed the problem of finding sources of information for clinical problem solving for those working "in a setting with no easy access to clinics, hospitals, physical therapy schools, or medical libraries" [9].

Thus, the move out of the institutional setting has coincided not only with increased professional autonomy but also with reduced access to the sources of medical and business information designed to support the physical therapist in making sound clinical and practice-management decisions. Three studies in the published literature address the information needs of physical therapists [10–12], but none addresses the needs of those in private practice. Another study by Dennis states that "as primary contact practitioners, physiotherapists are required to make independent referral and treatment decisions. Optimal service delivery is dependent on optimal independent decision-making" [13]. Information sources, however, are not identified as a factor in the "decision environment."

The study reported in this paper is the first designed to identify the information sources and information needs for decision making by physical therapists in a private-practice setting. The author surveyed physical therapists in private practice, asking the following questions:

- What types of information sources are used in the private-practice setting to make clinical or practice-management decisions? How frequently are these sources consulted?
- How would therapists rate the anticipated usefulness of additional information for making clinical and practice-management decisions?
- Which library services are the most attractive to therapists in a private-practice setting?
- What are the preferred modes of access to information services for those in private practice?

The goal of the survey was to gauge potential interest in health sciences library information and research services among unaffiliated health practitioners. It was anticipated that survey results would show a high level of use of internal sources of published research information (personal and office collections of the professional literature) and a low level of use of external sources of published research information (public and health sciences libraries and database services). Respondents also were expected to express interest in gaining increased access to information sources and services for clinical and practice-management decision making.

**METHOD**

**Sample selection**

The author identified physical therapists in private practice by calling all the physical therapy centers listed in Vermont telephone books. There were two criteria for inclusion in the study: the clinic had to be owned by a physical therapist, and there had to be at least one registered physical therapist on staff. Clinics affiliated with hospitals, home health agencies, or physician practices were excluded. Qualifying clinics were asked to provide the names of all registered physical therapists on their staffs; all clinics complied. The PT/OT Consortium, an association of physical and occupational therapists in private practice in Vermont, provided additional help in identifying therapists. Together, the phone books and the consortium yielded a list of fifty-three physical therapists in twenty-three private clinics in Vermont.

**Instrumentation**

A thirty-three-item survey instrument was developed to identify current information sources and information needed for clinical and practice-management decision making. Subjects were asked to indicate frequency of use for each of seven information sources. The questionnaire also was designed to gauge the projected usefulness of various information subject areas and library services. Usefulness was rated on a 6-point scale (1 = very useful, 6 = not useful). In
addition, subjects were asked to rank by preference various access routes to additional information services. The following demographic data also were sought: years since graduation and years in private practice. All sections of the questionnaire, other than the demographic component, allowed for open-ended responses.

The survey instrument initially was reviewed for validity by the research coordinator of Dana Medical Library at the University of Vermont. The instrument was further reviewed for content validity by two faculty members in the university's department of physical therapy. A pilot study then was conducted with eight physical therapists, all of whom later were included in the full study. The therapists completed the instrument and reviewed it for content validity. Changes suggested in all three phases of the validation process were incorporated into the final survey form.

Procedure

The fifty-three physical therapists were sent a package containing a cover letter, the questionnaire, and a self-addressed, stamped envelope. All packages were sent by first-class mail on April 11, 1994; the completed questionnaires were to be returned by April 22, 1994. On April 29, 1994, a follow-up cover letter along with a second copy of the survey and another self-addressed, stamped envelope were mailed to those who had not responded.

Data analysis

The data were analyzed by descriptive statistics using the frequencies, cross-tabulations, and Spearman correlations programs of the SPSS package. An alpha level of \( P = .05 \) was adopted for calculating significant differences.

RESULTS

Return rate

In the initial response period, thirty-one of fifty-three questionnaires were returned, for a response rate of 58%. An additional fourteen surveys were returned in response to the second mailing, yielding an overall return rate of 85%. At least one therapist responded from each of the twenty-three clinics. One survey was completed improperly and was not included in the final results.

Demographics

The mean number of years since graduation from physical therapy school was 11.9, with a range of 1 to 33 years; more respondents graduated in 1986 than in any other year. The mean number of years in private practice was 4.5, with a range of 1 to 13 years; more respondents entered into private practice in 1993 than in any other year. Seventy-three percent had entered into private practice during the previous five years.

Information sources used and frequency of use

Table 1 shows mean frequency of use for each of seven sources of information. Eighty-two percent of the respondents consulted colleagues or peers more than fifteen times a year when making clinical or practice-management decisions, thus making colleagues the most frequently used source of information. Sixty-eight percent of the physical therapists consulted personal or office collections of books and journals more than fifteen times a year when making decisions, and 82% used this source more than ten times a year. Moderate use levels were found for continuing education programs, professional associations, and health sciences libraries. Computer database services and public libraries were the least frequently used sources.

These usage patterns were similar to those found by Culnan in a study of the information-gathering behavior of professional employees in two large commercial organizations [14]. Frequency of attendance at continuing education classes was somewhat lower than that found by Domholdt and Durchholz in their study of physical therapists in Nevada, Utah, and North Carolina [15].

Preferred health sciences library services

Respondents rated the potential usefulness of eight medical library services (Table 2). The three most preferred services were receiving photocopies of requested journal articles by mail (55% of respondents gave this a rating of 1, the highest); mediated computer searches of the professional literature (66% gave
this a 1); and borrowing books, journals, and audio-visuals by mail. Rated as moderately useful were monthly updates of a computer search of the professional literature and a table-of-contents service. The three least preferred services were borrowing books, journals, and audio-visuals in person; instruction in database searching; and personally browsing the collections of a health sciences library. It should be noted that respondents anticipated that all services other than browsing would be useful, giving them mean scores above the midpoint on a 6-point scale of usefulness.

Spearman correlation coefficients revealed a moderate correlation between frequent use of peers and colleagues as an information source and high anticipated usefulness ratings for a mediated computer search service ($R = .476$, $P = .001$). There also was some correlation between frequent use of peers and colleagues and high anticipated usefulness ratings for instruction in database searching ($R = .262$, $P = .043$).

Utility of subject areas

Survey participants were asked to rate the usefulness of information on specific subjects for clinical and practice-management decision making. Mean ratings of usefulness for nine subject areas are shown in Table 3. Information on exercise counseling was rated as most useful, and information on preventive care and disorders tied for second.

Preferred access paths

The preferred mode of access to information was telephoning questions to a health sciences librarian and receiving materials by mail or fax. The Internet received a moderate rating as an access path to information. The least preferred means was physically entering a library and personally choosing material. As some therapists noted on their surveys, this is “too time consuming!” Spearman correlation coefficients showed that frequent use of personal or office collections of books and journals was linked to a strong preference for phoning a health sciences librarian as a means of accessing information and practice-management problem solving ($R = .302$, $P = .023$).

**DISCUSSION**

Summarizing the results of numerous information user studies, O’Reilly writes, “it is the accessibility . . . of the source that is often the determinant of its use” [16]. This seems to be the case among physical therapists in private practice, because the two most frequently used information sources are also highly accessible.

One of the seldom-used information sources, computer database services, certainly could be easily accessible if a user had a computer and a modem. Given the average number of years (11.9) since graduation, it may be inferred that therapists generally have had limited or no academic or professional experience with online search products. The lack of enthusiasm about the usefulness of both database instruction as a health sciences library service and the Internet as an access path further suggests a lack of exposure to automated sources, services, and access paths as a means of clinical and practice-management problem solving, as well as a possible preference for professionally managed research and information services.

However, the correlation between frequent use of peers and colleagues as an information source and high usefulness ratings for instruction in database

### Table 2

<table>
<thead>
<tr>
<th>Service</th>
<th>Rank</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving photocopies of journal articles by mail</td>
<td>1</td>
<td>1.6</td>
<td>0.73</td>
</tr>
<tr>
<td>Mediated computer searches</td>
<td>2</td>
<td>1.7</td>
<td>1.12</td>
</tr>
<tr>
<td>Borrowing materials by mail</td>
<td>3</td>
<td>1.8</td>
<td>1.14</td>
</tr>
<tr>
<td>Monthly updates of a computer search</td>
<td>4 (tied)</td>
<td>2.3</td>
<td>1.59</td>
</tr>
<tr>
<td>Table-of-contents service</td>
<td>4 (tied)</td>
<td>2.3</td>
<td>1.42</td>
</tr>
<tr>
<td>Borrowing materials in person</td>
<td>5</td>
<td>2.7</td>
<td>1.57</td>
</tr>
<tr>
<td>Instruction in database searching</td>
<td>6</td>
<td>3.0</td>
<td>1.95</td>
</tr>
<tr>
<td>Browsing collections in person</td>
<td>7</td>
<td>3.7</td>
<td>1.57</td>
</tr>
</tbody>
</table>

* Mean score based on rating scale of 1 to 6, where 1 = very useful and 6 = not useful.

### Table 3

<table>
<thead>
<tr>
<th>Content</th>
<th>Rank</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise counseling</td>
<td>1</td>
<td>1.84</td>
<td>0.96</td>
</tr>
<tr>
<td>Preventive care</td>
<td>2 (tied)</td>
<td>1.93</td>
<td>1.32</td>
</tr>
<tr>
<td>Disorder</td>
<td>2 (tied)</td>
<td>1.93</td>
<td>1.04</td>
</tr>
<tr>
<td>Evaluating therapy or therapeutic equipment</td>
<td>3</td>
<td>2.00</td>
<td>1.29</td>
</tr>
<tr>
<td>Diagnostic method</td>
<td>4</td>
<td>2.09</td>
<td>1.20</td>
</tr>
<tr>
<td>History and physical</td>
<td>5</td>
<td>2.40</td>
<td>1.37</td>
</tr>
<tr>
<td>Professional relations</td>
<td>6</td>
<td>3.00</td>
<td>1.38</td>
</tr>
<tr>
<td>Marketing practice</td>
<td>7</td>
<td>3.02</td>
<td>1.70</td>
</tr>
<tr>
<td>Practice management</td>
<td>8</td>
<td>3.06</td>
<td>1.80</td>
</tr>
</tbody>
</table>

* Mean score based on rating scale of 1 to 6, where 1 = very useful and 6 = not useful.
searching suggests that those who consult peers frequently might be receptive to GRATEFUL MED training programs. Certainly the strong interest of most respondents in tracking the literature through mediated computer searches, document delivery, selective dissemination of information, and table-of-contents services is consistent with their current efforts to keep up with the published literature.

Mean ratings of usefulness for information in specific subject areas verified that most physical therapists feel the need for additional information in all areas. The six content areas supporting clinical decision making received higher ratings than did the three supporting practice-management decision making. Perhaps clinical decision making is perceived as being the more complex task, or perhaps the wide standard deviations for the usefulness ratings for business management and marketing information reflect the variations in respondents' management responsibilities. For instance, physical therapists rating business management information as "very useful" had spent nearly 50% more years in private practice and had been physical therapists nearly twice as long as had those who gave low usefulness ratings. Similarly, those rating marketing information as "very useful" had been in private practice twice as long and had been physical therapists nearly 50% more years than had those giving a low usefulness rating. Possibly, experienced therapists carry increased responsibility for business management and marketing decisions and thus place a higher value on information supporting these two activities than do their less-experienced colleagues.

CONCLUSION

Physical therapists in private practice in Vermont frequently seek information. Besides consulting peers and colleagues, these therapists have a well-established practice of turning to the professional literature when seeking information for clinical and practice-management decision making. They are not, however, in the habit of going beyond these limited print resources to seek information from bibliographic databases or public or health sciences libraries. This reluctance may be due in part to a lack of familiarity with computer products and a lack of access to academic and hospital-based health sciences libraries. Certainly therapists exhibit a high level of interest in access to additional sources of information, giving all information subject areas a usefulness rating above the midpoint of the survey scale. Furthermore, their survey responses indicate strong interest in accessing health sciences library information and research services should they become available.

The results of this study cannot be generalized to geographic areas outside Vermont. Nevertheless, the following findings may prove useful to health sciences librarians in any state planning to extend services to physical therapists in private practice.

First, products that health sciences librarians take for granted may well be unfamiliar to those who have been in private practice for several years. A lack of enthusiasm for electronic products and services may indicate nothing more than a lack of familiarity. Librarians might enhance the receptiveness of therapists to outreach services by explaining the impact of electronic databases and electronic document delivery on private practice. Librarians could write articles for physical therapists' professional journals or prepare presentations or exhibits for their professional meetings in an effort to increase the exposure of this group to new products and services.

Second, physical therapists in private practice do not need to be convinced of the value of their literature. Outreach librarians might focus instead on offering services that improve access. Training programs in GRATEFUL MED and LOANSOME DOC should be promoted as means of gaining access to a greatly increased percentage of the professional literature. Survey respondents displayed a keen interest in receiving photocopies of journal articles by mail from health sciences libraries. This finding suggests that LOANSOME DOC might be promoted as a means of expediting the ordering process.

Third, many physical therapists in private practice feel that the most efficient use of their time is to have database searches conducted by a health sciences librarian. A library offering only GRATEFUL MED will miss out on the larger market for a more complete line of professional information and research services. A full-service, fee-based outreach program focused on saving the client as much time as possible would be more attractive to some than would end-user searching. Service packages offering mediated searching of a broad variety of databases with electronic delivery of documents and remote check-out of monographs could prove to be exceptionally attractive to physical therapists in private practice. Librarians might wish to survey their market area first to determine what percentage of physical therapy clinics have modems. Some clinics might appreciate the assistance of a health sciences library even in selecting hardware and software to aid in the service request and delivery process.

As demand for physical therapy services increases in a society with growing populations of both the aged and the sports-minded and as state practice laws change and more private practice clinics are established, physical therapists will become an increasingly important client group for hospital and academic health sciences libraries interested in extending outreach services.
REFERENCES

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