
Non-librarian health professionals becoming librarians and information specialists: results of an Internet survey

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Objectives: To obtain basic information about non-librarian health professionals who become librarians and information specialists.

Methods: The survey was a Web-based questionnaire. A non-random sample of persons was obtained by posting messages to several large Internet electronic discussion groups. Individuals who met the selection criteria and were willing to participate filled out a Web-based form designed using common gateway interface (CGI) programming.

Results: 118 forms were analyzed. Three subgroups of participants were identified and statistical comparisons among these groups were carried out for many of the quantitative questions. Information concerning reasons they left their original field; factors influencing their choice of the field of library and information science; reactions of family, friends, and colleagues; and interactions with patrons and other information about this group was obtained and summarized. A health sciences background was seen as helpful in the new career as information specialist. Most people were happy with their new profession despite negative reactions from colleagues, relatives, and, occasionally, patrons. Feelings of regret and abandonment of their patients were noted by some. Many persons did not know that peers had made similar career changes.

Conclusions: A health sciences background imparts an expertise in both the vocabulary and subject matter of medicine that non-biomedical individuals would not ordinarily have. Although becoming a librarian may be perceived as a very positive career change for an individual, societal opinion and pressure can make such a career change difficult. Nevertheless, participants in this survey demonstrate a high level of satisfaction with their new careers and are quite happy with their work.

INTRODUCTION

Health professionals change careers for a variety of reasons. The new career may be within the area of biomedicine or in an entirely different arena. Challenging changes made in the delivery of health care

by the imposition of new insurance regulations and the advent of managed care have certainly in many instances been contributing factors for individuals to seek a new profession [1, 2]. Information about some of the other reasons health professionals choose to change careers will be presented below. One career alternative available to the non-librarian health professional is that of library and information science, including the subdivision of medical librarianship.

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Great changes have taken place in the practice and management of all the health professions in the United States since Congress passed the Health Maintenance Organization (HMO) Act of 1973. Currently, approximately 80% of employees whose employers' provide health insurance coverage are enrolled in some form of managed care plan. In 1988, the percentage was only about 30% [3]. Health professionals were and continue to be faced with changes in their practice style and workplace environment due to changes in the health care delivery system. For some, these conditions are neither conducive to nor compatible with personal career happiness and therefore necessitate a career change. Regardless of the reasons, health professionals leave their chosen initial professions to pursue other careers, not only in nonclinical areas, but also in fields that are non-biomedical.

Societal perceptions of the health care professional who leaves an active, direct patient care career may be problematic to individuals wishing to change their professions. Many physicians who leave medicine may be stigmatized by a society that believes that physicians do not leave their careers unless there is "something wrong" [4]. Other health professionals may be confronted with the same type of societal branding.

The present survey was conducted, because no specific literature on the subject of non-librarian health professionals who become librarians could be found in the English-language medical or library literature. Motivations for a non-librarian health professional to switch to a career in this field were therefore sought. Information about whether individuals were aware that others have made similar career changes, how happy they were in the new profession, and how pleased students were with the new course work (for those still in professional schools) was also requested in this survey. Additionally, the work the individuals did, whether they perceived their background as helpful with present duties and whether there were feelings of abandonment of patients, colleagues, or both, were considered to be important and in need of documentation.

The authors also were curious about the reactions of friends, families, and colleagues concerning this type of career change. Additionally, individuals were asked if they made known their status as a current or former non-librarian health professional to their patrons, colleagues, or both. For those health professionals who still were students, information about their optimism for future job prospects was sought. Information revealed by this survey would be of potential use to health professionals contemplating or undergoing a career change as well as professionals providing career counseling services to such persons.

HISTORICAL PRECEDENTS

Historically, non-librarian health professionals have chosen the field of library and information science as

either a second career choice or as an additional duty along with their current profession. The idea of the physician or nurse librarian is not a new one. Physicians have been writing and amassing medical information for centuries and, thus, have been librarians of their own personal collections.

Dr. Gabriel Naude, born in Paris in 1600, practiced medicine in France, but his strong love of books and libraries drew him to Rome, where he became a librarian. He is considered the first important theoretician of modern library organization [5]. Dr. Georg Christian Fuchs, born in 1722, was a German court physician and librarian. He was also a noted geologist [6].

In England, the Royal College of Surgeons in London recognized the need for someone to care for and develop their book and specimen collection. Dr. Robert Willis, a physician and medical historian, was asked to be the college's first librarian in 1827 [7]. In 1836, he began a project to collect "every work of consequence, not already in the library, that was published in the last forty years." He also compiled an *Author Catalogue* in 1831 and a *Classified Catalogue* totaling 1,200 pages in 1843. Dr. Willis was active outside of his library work as well, translating several medical books during this time. His work in building "the finest medical and anatomical library in Europe" was obviously a great contribution to both medicine and librarianship.

Another notable European physician librarian was Dr. William Munk, who was considered an authority on smallpox. In 1857, he was appointed the librarian at the Royal College of Physicians in England and held the position until his death in 1898 [8]. He was given the title Harveian librarian in memory of Dr. William Harvey, the great anatomist and physician of the 1600s. His assuming this position coincides with a change in the library from an "old club library" to a practical medical library. Dr. Munk created the *Roll of the Royal College of Physicians* in London in 1861, which served as a biographical dictionary of the members of that society. The *Roll* had not been intended for publication but was found so useful that it was published the year after it was written.

Dr. John Shaw Billings was born in Indiana in 1836 [9]. He joined the Union Army during the Civil War as a physician and was assigned to the Surgeon General's office in 1864. The Army Medical Department, having decided to collect specimens and case reports of the Civil War for a museum and library that would present the war's medical and surgical history, gave Dr. Billings the task of expanding the small library of the Surgeon General's office to accommodate the new collection. He tirelessly built the library to serve the museum and the nation.

In the thirty years he remained at his post, he expanded the original 2,500 volumes in the library to more than 200,000. Although other libraries had ex-

cellent printed catalogues to serve as a guide, they only contained journal names and not the articles contained within the journals. Dr. Billings proposed a catalog of the "National Medical Library," as he called it, which would contain a subject and author catalog of monographs and journal titles. Additionally, and very importantly, he added to this catalog a subject indexing system for all articles in the journals held in the library's extensive and rapidly expanding holdings. The resulting sixteen-volume *Index-Catalogue of the Library of the Surgeon General's Office, United States Army* (series one), stood as the most complete guide to medical literature in the nineteenth century. The *Index Medicus* was created as a monthly supplement to ensure that current information would be available. Thus, through Dr. Billings' work, the *Index-Catalogue* filled in the bibliographical gap of medical writings and made the accumulated literature of the past available.

In the 1890s, American medical schools realized that a comprehensive and well-maintained medical library was essential to a rapidly modernizing medical education [10]. Before this time, physicians had to rely primarily on their own private collections of medical journals. At the Syracuse University College of Medicine (SUCM), Dr. Frank Marlow, professor of ophthalmology, became the librarian in 1890 and was concerned that students were not using the library, because they felt it was unreliable and disorganized. Although Dr. Marlow began the collection and restoration process, the effort and dedication exhibited by Elizabeth L. Shrimpton, M.D., brought the library efficient methods of cataloging, inventory control, and reader services. She received her medical doctor degree from SUCM in 1901. The policies and practices she instituted continue to make the library accessible to the medical community of Syracuse, and for her labors she is known as the first "real" medical librarian at SUCM. Dr. Marlow's plans for the library could not have been completed without Dr. Shrimpton's tireless work.

Nurses who became librarians have also made great contributions to the field of library and information science. Virginia Henderson, born in 1897, graduated in 1921 from the Army School of Nursing in Washington, DC [11, 12]. She continued her education and earned both a bachelor of science and a master of arts degrees in nursing education at Teachers College, Columbia University. She spent fourteen years teaching at Columbia University, where she revised Bertha Harmer's *Textbook of the Principles and Practice of Nursing*, which was published in 1939. Henderson accepted a position at the Yale University School of Nursing and directed the *Nursing Studies Index* project from 1959 to 1971. The four-volume *Nursing Studies Index* was the

first annotated index of nursing research. Henderson was named research associate emeritus at Yale University at the age of seventy-five. After this time, her career focused on international teaching and speaking engagements. Her work on many important issues in health care and in promoting nursing research as the basis for nursing knowledge earned her many awards and honors. She has been termed the "twentieth-century Florence Nightingale."

METHODS

In order to obtain a sample of non-librarian health professionals who had either completely changed careers to the field of library and information science or were in the process of obtaining a degree in that field, appropriate messages were posted to several Internet electronic discussion lists. Persons still working at both careers were permitted to be in the study, as were persons who had left a program for a specific health profession before receiving their professional health degree or certificate. Internet mailing lists were selected that focused on library and information science for either students or professionals. Local or regional lists and both national and English-language international lists were used.

Medical, academic, and general library mailing lists that had large numbers of subscribers were selected. Persons responding to the posting were sent the Web location of the survey form and given the option of requesting a text copy delivered either by email or postal mail. Postings were sent to the various mailing lists between December 1999 and January 2000. A small number of participants were not members of Internet mailing lists to which the authors posted but were informed about the study by members who saw the posting and knew they met the selection criteria. Three reminder emails were sent to those who had responded to the posting, but who had not completed the survey up to the time the reminder was sent. Responses were received from December 1999 to February 2000. All but five responses were via the Web page form. Two of these responses were returned via the postal system and three as a direct email messages. A supplemental question was sent to all Web-form responders inquiring whether the participants revealed their former health career to patrons or colleagues in their current library and information science positions. The exact wording of this supplemental question is shown in the Appendix.

The research survey form was designed as a Web page using common gateway interface (CGI) programming for many of the questions. Results were sent to the first author upon clicking on the "Submit" button.†

RESULTS

A total of 118 non-librarian health professionals who had either changed careers to the field of library and

† A copy of the form may be seen at <http://members.xoom.com/crfikar/>.

Table 1
Responses to Yes/No survey questions

Question	Number of respondents	Yes (%)	No (%)
Are you currently a student in a master's degree program in library and information science?	112	21 (18.8)	91 (81.2)
Do you know others in your profession who made a similar switch?	112	41 (36.6)	71 (63.4)
Do/did you feel you are/were abandoning your patients or coworkers?	112	20 (17.9)	92 (82.1)
Did you consider any alternate professions before choosing library and information science?	109	58 (53.2)	51 (46.8)
Do you think your medical background has benefited or will benefit you in your new profession?	111	109 (98.2)	2 (1.8)
Do you ever regret leaving your previous profession?	96	18 (18.8)	78 (81.2)
Would you ever return to your previous profession?	96	16 (16.7)	80 (83.3)
Do your library colleagues know of your former career in the health professions?	98	97 (99.0)	1 (1.0)
Are you still working in the health care field?	21*	8 (38.1)	13 (61.9)
Are you happy with your course work?	21*	18 (85.7)	3 (14.3)
If you are still working in the health care field, do you feel that taking these courses helps you to cope with your present job?	8*	6 (75.0)	2 (25.0)

* Question answered only by students.

information science or were engaged in a master's program in that field were identified. Survey forms were completed by 112 (94.9%). Of those who completed the survey, forty-seven (42.0%) were nurses; forty-five (40.2%) were allied health professionals; and twenty (17.9%) were doctors of medicine, dentistry, veterinary medicine, or podiatric medicine. One of the persons completing the survey form as a medical physician completed 5 11/12 out of the six years required for a doctor of medicine degree. This person was the only health professional participant in the survey who did not have a degree in a non-library health discipline. Allied health professionals represented in this study included speech therapists, audiologists, X-ray technicians, physical therapists,

pharmacists, laboratory technicians, medical social workers, medical researchers, and others.

The 110 survey participants, who stated the number of years that they practiced, worked in the non-librarian health care field 13.1 ± 8.7 years (mean \pm 1 SD) with a range of 0–32 years. The ninety-eight participants, who revealed the number of years that they have been in the library and information science field, worked 6.8 ± 5.9 years (mean \pm 1 SD) with a range of 0.2–24 years. Most participants were from the United States with approximately 20% currently residing in Canada, England, Australia, Kuwait, Lebanon, Uruguay, and The Netherlands. For those participants for whom the exact type of library work could be determined, eighty-two of ninety-two (89.1%) were engaged in biomedical librarianship or informatics.

There were twenty-one (18.8%) master's level library and information science students represented among the 112 survey participants. A tabular summary of quantitative data responses is presented in Tables 1, 2, and 3. When analyzed by health profession subgroups, there were some differences as noted in the following paragraphs. Subgroup analysis was done only on the following questions:

1. Do you know others in your profession who made a similar switch?
2. Do/did you feel you are/were abandoning your patients or coworkers?
3. Do you think your medical background has benefited or will benefit you in your new profession?
4. Do you ever regret leaving your previous profession?
5. Would you ever return to your previous profession?
6. How optimistic are you about finding a position when you graduate?
7. How satisfied are you with your decision to change careers?
8. Do your library colleagues know of your former career in the health professions?

Subgroup comparisons were accomplished using "difference of two proportions" tests [13]. Statistically significant differences were found only for four of the above eight selected survey questions.

The subgroup data for participants who answered "yes" to having regrets about leaving their biomedical

Table 2
Responses to satisfaction survey questions

Question	Number of respondents	Unsatisfied (%)	Somewhat satisfied (%)	Satisfied (%)	Very satisfied (%)
How satisfied are you in your new position?	100	0 (0.0)	9 (9.0)	29 (29.0)	62 (62.0)
How satisfied are you with your decision to change careers?	10*	0 (0.0)	1 (10.0)	4 (40.0)	5 (50.0)

* Question answered only by students.

Table 3
Responses to optimism survey question

Question	Number of respondents (%)	Not optimistic (%)	Somewhat optimistic (%)	Optimistic (%)	Very optimistic (%)
How optimistic are you about finding a position when you graduate?	21*	1 (4.8)	4 (19.0)	6 (28.6)	10 (47.6)

* Question answered only by students.

careers were as follows: eleven of forty-three nurses (25.6%), two of fifteen doctors (13.3%), and five of thirty-eight allied health professionals (13.2%). There was a statistically significant difference, choosing $\alpha = 0.10$, between the nurses and allied health professionals with $P = 0.075$. The doctor subgroup comparisons could not be done because of the limited sample size.

The subgroup data for participants who answered "yes" to feeling that they were abandoning their patients were as follows: eleven of forty-seven nurses (23.4%), five of twenty doctors (25.0%), and four of forty-five allied health professionals (8.9%). There was a statistically significant difference, choosing $\alpha = 0.05$, between the nurses and allied health professionals with $P = 0.04$. Again, the limited size of the doctors subgroup precluded comparisons with the other groups.

The subgroup data for participants who answered "yes" to knowing peers who made a similar career change were as follows: twenty-four of forty-seven nurses (51.1%), six of twenty doctors (30.0%), and eleven of forty-five allied health professionals (24.4%). There was a statistically significant difference, choosing $\alpha = 0.01$, between the nurses and allied health professionals with $P = 0.004$. The comparison between nurses and doctors, choosing $\alpha = 0.10$, showed a statistically significant difference with $P = 0.053$. There was no statistically significant difference between the doctor and allied health professional subgroups.

The subgroup data for participants who answered "yes" to returning to their previous career were as follows: eleven of forty-three nurses (25.6%), one of fifteen doctors (6.7%), and four of thirty-eight allied health professionals (10.5%). There was a statistically significant difference, choosing $\alpha = 0.05$, between the nurses and allied health professionals with $P = 0.05$. The limited size of the doctors subgroup precluded comparisons with the other groups.

A large number of reasons in varying combinations were given in response to the question "What motivated or motivates you to leave (or contemplate leaving) your chosen field within the health professions?" Frequently cited factors included stress, "burn out," and job dislike or dissatisfaction. Reasons cited for job dislike or dissatisfaction were managed care, changes in the health care delivery system, insurance regula-

tions, inordinately large amounts of time required for detailed documentation, staff cut-backs requiring increasing work loads and responsibility, blood-borne pathogen risk, increasing threat of litigation, loss of autonomy, business-like atmosphere rather than nurturing and helping attitude among administrators, long hours, and perceptions of lowered standards of care. In addition, physicians and other direct patient care practitioners cited as a problem the requirement imposed upon them to see more patients in less time.

Other reasons included having personal health problems, being unable to find a job in the health professions, and moving to a new country and therefore not having an appropriate license. Some people wanted a career with more predictable hours, more limited hours, or both in order to be able to spend more time with family or to raise a family. A few persons felt temperamentally unsuited or inadequately trained in their field or did not like working directly with patients. Some were nearing retirement age but wanted to continue working in a less physically or time demanding situation. Some health professionals gave no reasons for leaving the health professions other than a love of and interest in the field of library and information science, computers, or both.

Not unexpectedly, the replies to the query "What would have to change in order for you to consider returning to your field in the health professions?" accorded with the stated reasons for originally wishing to leave. Many persons simply wrote that they would either never return to their former positions or would do so only if forced by circumstances, such as job loss or severe financial burdens. Much mention was made, particularly by nurses and allied health professionals, of better salaries and working conditions including such factors as "better staffing," less stress, less responsibility, and fewer working hours and lighter workload. Also mentioned were a lessening of regulations, the removal of the "profit motive in health care," the wish that nurses would work "more as a team" again, responsibility for a smaller number of patients, less paperwork, more autonomy, and the desire to be "more appreciated."

Frequently mentioned responses to the question "What motivated you to choose library and information services as a new career choice?" included a love

of books or an interest in libraries, computers, information retrieval, online indexes, and electronic databases along with a strong commitment to help or teach others. Many stated that going into medical librarianship allowed them to stay in the health care field but with better hours, better quality of life, more pleasant environment, less stress, and no patient care responsibility. Those who entered or contemplated entering the field of medical librarianship also frequently mentioned the fact that, in this field, they could continue to use their medical knowledge and vocabulary base to enhance their ability to help patrons.

Some mentioned being influenced by librarians either among their own family members or professionals with whom they had previously worked or by whom they had been taught. Some had previous positive experiences working in a library as work-study students or research assistants or other previous job experiences. A few persons had taken library courses and found the course work interesting and the faculty stimulating. Several mentioned close proximity to a school of library and information science as a motivating factor as well as the shorter amount of time to earn a master's degree compared to a doctoral degree.

Work in the library and information science field was said to be "socially good work with less personal cost compared to nursing." Working in a medical library offered the "opportunity to be with inquisitive, bright people." One respondent stated that the field of medical librarianship needed people who knew about the health care system, the actual patient care setting, and the professionals in that system. For some, medical librarianship offered a way of "staying connected" to the health professions. Career counselors suggested the field of library and information science to a few of the respondents.

Alternative career choices that were enumerated in answer to the question "Did you consider any alternative professions before choosing library and information science?" included computer science, teaching, and law. Other cited areas were nursing, nurse practitioner, museum work, other branches of medicine, social work, the field of allied health, alternative medicine, writing, business, accounting, sales, architecture, florist work, and others.

Many explanations were given as to how previous health professional experience helped in a career of library and information science, in answer to the query "Do you think your medical background has benefited or will benefit you in your new profession?" Numerous respondents working as biomedical librarians commented that their former health careers imparted a thorough understanding of the language and vocabulary of medicine, thus making patron-librarian communication and interaction more efficient and productive.

"Higher credibility" with patrons, as well as famil-

arity with health professionals' information needs, was also mentioned among those working in biomedical libraries. The ability to "think like an information professional as well as a health care professional is invaluable." A "greater appreciation of patron needs and requirements" and a "better understanding of their questions" were often reported. One person commented that "I speak my client's language." One patient education librarian believed that her nursing background was "essential" to her work.

The theme of being able to conduct quality reference interviews as well as the ability to understand the type of information needed by health professionals and, therefore, to tailor literature searches and filter results appropriately was touched upon numerous times in this survey. Familiarity with journals and texts in the nursing and medical fields was said to be an advantage not only in providing direct patron assistance but also in the tasks of cataloging and acquisitions work. Also of help with reference work, cataloging, and acquisitions was an "in-depth understanding of the subject matter and resources" available in the medical field. Personally knowing a large number of medical experts and consultants and being on easy speaking terms with such persons was reported as a distinct advantage of librarians who were health professionals.

Other stated advantages of former non-librarian health professionals included receiving invitations to membership on academic medical (nursing) or medical (nursing) education committees or both, participating in clinical rounds, and establishing a library staff health program, including checking employees' blood pressures for those appropriately licensed. Having been students themselves in the various health profession schools, several participants believed they had a greater understanding of health sciences students and their information needs as well as having a special camaraderie with them. A few survey respondents felt that their health profession background had actually helped them to obtain their present position.

Years of patient care responsibility were helpful in public and academic environments as well. The ability to communicate and empathize with people in need of consumer health information was noted. Understanding people and the ability to work in stressful conditions were also said to be useful skills. Just "knowing how to deal with the public" was mentioned as an asset.

The answers to the question "How do your friends, family, and colleagues feel about you leaving the health field?" revealed that most were very supportive of the decision to change careers to the field of library and information science. Quite a few survey participants stated that colleagues were actually envious that they were making this career change. Other positive comments noted were pride, understanding, happiness, relief, admiration, and encouragement and being

pleased and stating that the person was "brave." Some families were relieved or happy that the former non-librarian health professional was no longer in the stressful or depressing job situation. Family members saw the new career as a good one as well as being a "good fit" for the respondent.

Not all the comments were positive, however. Some family members, friends, or colleagues were reported as being shocked, puzzled, confused, disbelieving, feeling betrayed, bewildered, disappointed, appalled, "freaked," skeptical, not pleased, and not happy. One brother considered the respondent "a fool." A few family members or friends were "less than delighted," very resistant to the change (commenting "once a nurse, always a nurse"), or unable to understand. One husband believed that the respondent was a "personal failure." Some felt the participant was "throwing away a promising career," "throwing away all that education," or acting "crazy." A few reactions were stated to be mixed or neutral. The authors' interpretations of responses was such that sixty-three of 106 (59.4%) were believed to be positive, seventeen of 106 (16.0%) negative, twenty-two of 106 (20.1%) mixed, and four of 106 (3.8%) were interpreted as neutral.

Finally, the responses to the question "What are your general duties at work?" were numerous and varied. Many persons reported themselves to be managers or directors of academic libraries or hospital libraries. Many were solo librarians for small hospital libraries and therefore did "everything." Some specialized areas touched upon included medical reference, general reference, cataloging, collection development, circulation management, Web design, intranet development, electronic resources, computer and local area network (LAN) support, user education, information filtering, assistance with biomedical publications, and others. Also mentioned were teaching responsibilities, user education, committee work, hospital rounds attendance, clinical medical librarian work, patient education, nurse education work, software training, email groups management, writing for scientific journals, telemedicine project work, server maintenance, abstracting, indexing, and regional or national interlibrary loan programs management.

Answers to the supplemental question (Appendix) mainly demonstrated positive reasons for revealing the fact of a former or concurrent health career to patrons or staff. As interpreted by the authors, fifty-six of eighty (70.0%) respondents had primarily positive comments; nineteen of eighty (23.8%) had mixed comments; and five of eighty (6.3%) had primarily negative comments on this topic. Some health professionals gave specific reasons for not revealing their former or concurrent profession, particularly to lay patrons.

Most survey respondents believed that revealing their previous non-librarian health profession work was very beneficial to the librarian-patron interaction. A physician

stated that "doctors sometimes feel they can better communicate with doctor colleagues than with librarians," and "their terminology changes the moment they hear I am a doctor as well." Many answered that letting the patron know their health profession status gave them "credibility" as well as helped to reassure patrons that the librarian was knowledgeable in the subject area. Some commented that the patrons were more willing to elaborate on their information requirements, which would enable the information professional to do a better literature search. Revealing previous health care experiences enabled the reference interview to be conducted at a "higher level" and helped patrons feel comfortable with the filtering and screening that librarians or information scientists performed. One librarian felt that revealing a health background ensured trust and often was accompanied by a demonstration of "relief in their faces." Sharing this type of information was noted to make librarians "more respectable as a professional." It was also said to add "authenticity" to the librarians' work.

When the patron knew the clinical background of the librarian or information professional, there was "no need to explain their needs in layman's terms." "They do not have to 'dumb down' or simplify their questions." "There is a certain 'bonding' or identification that occurs" when the patron knew of this background. "When someone requesting a search does not think I would understand what they are looking for—telling them my background eases the situation." "Many of the faculty prefer a librarian with a medical background."

Some librarians and information professionals revealed their former clinical background only with much caution, and some never told patrons. A reason for not revealing their previous career to patrons, and especially to lay patrons, was the concern about possible litigation when the patron believed that the librarian was giving out medical advice. One nurse librarian did not want her "license on the line." One librarian never told patrons because "they want to tell you every ailment and get free advice." Another stated that the ability to be sued was "greater if your health background is known." A respondent felt that "you could easily get into a situation when you could be practicing medicine without a license as a medical librarian." In contrast, one librarian who still worked as a health professional also gave allergy shots to colleagues.

Some respondents said they became tired of having to explain their reasons for leaving. "Telling someone sets the stage for a whole series of questions as to the reasons why and that can be upsetting," because the subject may easily evoke an emotional response. A physician stated that telling another physician usually encouraged a "better understanding of the query," but telling a lay person may actually be intimidating or

else encourage them to seek actual medical advice from the physician librarian.

DISCUSSION

This survey is the first one reported on the subject of non-librarian health professionals who have become librarians and information scientists. About 90% of the participants were in fact biomedical librarians, even though several large non-medical library mailings lists were used to solicit participants. Although the sample is not a random one, the authors believe that the large sample size of 112 respondents ensures enough credibility for the data to be considered important and at least somewhat representative. Almost all participants were active users of library-related electronic discussion lists with the exception of a few persons contacted through friends who were active users. This method of obtaining potential participants excludes basically all non-subscribers or current non-users of these facilities.

Representatives from many areas of the health professions have chosen to become librarians and information professionals, including doctors, nurses, and allied health professionals. To an extent determined by their specific discipline, these professionals possess an advanced knowledge of medical terminology and a firsthand knowledge of the information needs of clinicians, technical support personnel, and health care consumers. The professional communication skills developed during their first careers are perceived as providing a very solid foundation and starting point for their new careers in library and information science.

In addition to providing technical knowledge of the language of medicine and the allied health sciences, the health sciences background also provides the powerful advantage of subject expertise. Added to this is a cross-disciplinary familiarity and ease of communication that exists among members of the health care field that facilitates the information professional's job.

Many of the professional relationships formed during the former (or ongoing) non-librarian medical career can be potentially beneficial to the librarian and information specialist. Having these personal acquaintances with a variety of medical specialists enables these librarians to call upon the biomedical subject experts for assistance in finding information or resources, an option not often available to non-health care background librarians.

Survey responses reveal that a health professions background gives credibility to the librarian and information specialist in interactions with health personnel as patrons. Although knowing this background encourages some patrons to explain their information needs in full professional vocabulary and to volunteer more details of the problem, potentially negative consequences of informing patrons or colleagues of a former health sciences background do exist. The librarian

is not being employed to give medical information or advice to patrons and must always bear in mind the legal ramifications of providing medical advice or opinion. Negative or derogatory remarks concerning the career change may occur. Questions concerning the reasons for the career change may lead to feelings of having to justify a socially "questionable" move and therefore have the potential of creating an awkward situation. Some patrons may actually be intimidated by the knowledge that the librarian is a former (or practicing) direct patient care provider and would be discouraged from seeking their help.

Career change may be a major event in a person's life, and feelings of regret and insecurity would be likely to occur at least at some point during the transition period. Twenty percent of survey participants do have regrets about leaving their biomedical careers, and a similar percentage reported feeling that they are abandoning their patients. This information has potential use for those providing career counseling for health professionals. Knowledge that others also have feelings of regret, abandonment of patients, or both is of potential benefit to persons in the process of changing careers.

Also of potential use for career counseling purposes is knowledge of the fact that many non-librarian health professionals making the transition to librarianship do not realize that peers have made similar moves. This survey demonstrates that approximately 63% of the respondents do not know other professionals who have made similar career changes. Just knowing that peers have successfully made a similar career transition may be very reassuring information, particularly to the allied health professionals and doctors who seem to be more unaware of others making similar career changes than the nurses in this survey.

Fortunately, most friends, colleagues, and family members of the survey participants are very supportive of the career change decision. However, about 36% of survey respondents have experienced negative or mixed reactions to the (anticipated) career change. Shock, puzzlement, confusion, betrayal, and being termed a "fool" or a "personal failure" are clearly reactions from friends or loved ones that potentially require career counseling or other support. This information may be of importance to such counselors.

Most students earning a master's level degree in library and information science are optimistic about their chances for successful employment and are happy with their course work. About 75% of those who are still working in the health field while attending school feel that the academic work is helping them to cope with a career that they want to leave. Ninety percent of students are satisfied or very satisfied with their decision to change careers to the field of library and information science. Their level of optimism in respect to finding a position in this field is high, as shown in Table 3.

CONCLUSION

A health professions background clearly proves to be very useful to the survey participants in their provision of information services, both biomedical and otherwise. The possessor of such a background has an expertise in both the vocabulary and subject matter of medicine that individuals without a biomedical background do not have. The ability to communicate on a peer level with other health professionals to obtain specific reference information is of great potential usefulness to the reference librarian and other information professionals. What better background is there to provide pediatric reference services than that of a diplomate of the American Board of Pediatrics, with many years of clinical experience, who possesses a master's level degree in library and information science?

Those non-librarian health professionals who choose the field of medical librarianship as their new career path in library and information science will remain in the health care field. Such individuals can continue to use much of their knowledgebase and communication skills in their continuing efforts to ensure quality patient care and support medical research efforts.

Although becoming a librarian may be perceived as a very positive career change for an individual, societal opinion and pressure can make such a career change difficult. Negative feelings from friends, colleagues, and patrons have the potential to adversely affect the health professional contemplating a change in career. Knowing that others have made such career changes may prove reassuring. The knowledge that many historical figures in the field of library and information science were also physicians, nurses, and almost certainly other types of health care professionals may also be helpful. Career counselors need to be aware that health professionals may be faced with very negative comments from family and friends and may need help in overcoming this potential adversity. Fortunately, the participants in this survey demonstrate a high level of satisfaction with their new careers and are quite happy with their work. The knowledge and skills that they bring to the field of medical librarianship are indeed most welcome.

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REFERENCES

1. AMERICAN MEDICAL ASSOCIATION. *Leaving the bedside: the search for a nonclinical medical career*. Rev. ed. Chicago, IL: The Association, 1996.
2. SCOTT M. *Planning for a successful career transition: the physician's guide to managing career change*. Chicago, IL: American Medical Association, 1999.
3. KNIGHT W. The evolution of managed care. In: Knight W, ed. *Managed care: what it is and how it works*. Gaithersburg, MD: Aspen Publishers, 1998:1-17.
4. AMERICAN MEDICAL ASSOCIATION, op. cit.
5. Naude, Gabriel. In: *Encyclopedia Britannica CD2000*. Deluxe ed. [CD-ROM]. Chicago, IL: Britannica.com, 2000.
6. Fuchsel, Georg Christian. In: *Encyclopedia Britannica CD2000*. Deluxe ed. [CD-ROM]. Chicago, IL: Britannica.com, 2000.
7. LEFANU WR. Robert Willis—physician, librarian, medical historian. In: *Proceedings of the XXIII International Congress of the History of Medicine*, London, 2-9 September 1972. London, U.K.: Wellcome Institute of the History of Medicine, 1974:1111-5.
8. PAYNE LM, NEWMAN CE. Dr. Munk, Harveian librarian: the first period. *J R Coll Physicians Lond* 1977 Apr;11(3):281-8.
9. BLAKE JB. The physician as bibliographer. *Bull N Y Acad Med* 1985 Apr;61(3):240-9.
10. LUFT EVD, HAWKINS DK. Elizabeth Latimer Shrimpton, M. D. (1875-1955): unsung heroine of medical librarianship. [Web document]. Syracuse, NY: SUNY Health Science Center, 1999. [21 Oct 1999; cited 18 Apr 2000]. <<http://www.hcsyr.edu/library/history/shrimpton.html>>.
11. VIRGINIA A. Henderson, 1897-1996. [Web document]. Washington, DC: American Nurses Association, 2000. [cited 18 Apr 2000]. <<http://www.ana.org/hof/hendva.htm>>.
12. ALLEN M. Tribute to Virginia Averal Henderson, 1897-1996. [Web document]. Edmonton, AB: University of Alberta, 1999. [13 Feb, 1999; cited 18 Apr 2000]. <<http://www.ualberta.ca/~jrnorris/nt/henderson.htm>>.
13. BRASE CH, BRASE CP. *Understandable statistics: concepts and methods*. 4th ed. Lexington, MA: D.C. Heath, 1991:420-7.

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APPENDIX

Supplemental question

The authors would like all survey responders to answer some additional questions about whether or not you share the fact that you are (were) a practicing health professional. If you do tell people, can you tell us whom you tell (staff, patrons, colleagues, faculty, or students in academic settings etc.). Do you feel this to be beneficial in your patron interactions and why? If you do not share this information with people, why not? Please explain. Do you feel it would be detrimental to the patron interaction? Please explain.