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**The Added Value of an Informationist at New York Medical College**

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*Adding value* to information is part of the core and expertise of libraries. Value is added to information by easing access through indexing and bibliographic description, and through the creation of systems which make information more logically organized and easier to find. Librarians themselves add value to the collections (both virtual and actual) they develop by helping users navigate the vast literature, systems, and interfaces available through content development, instruction, reference assistance and search services. Michael Gorman perhaps says it best, "Through lifelong learning, libraries can and do change lives..." (Gorman, 2000). Health sciences librarians see quality health information as an inherent value. We believe providing quality information ultimately translates into better health. Measuring how, the *added value*, is an ongoing effort. The recent Medical Library Association (MLA) funded study of the value of health sciences libraries in hospitals and academic medical centers maps library contributions to their organizational missions and defines "a bottom line" value if there is a relationship (Abels, 2002).

In this context, Frank Davidoff and Valerie Florance sparked much debate when they proposed the creation of a new health information professional: an *informationist*. Was this really new? Was it just the latest jargon *du jour* for what medical librarians were already doing? One person quipped, "So what are we... chopped liver?" (Kronenfeld, 2002). This paper describes the planning process completed by the Medical Sciences Library of New York Medical College (NYMC) to explore how the informationist concept could serve as an opportunity to add value. The hypothesis is that an informationist does add value, must be defined in the academic or health context in which one works, staff commitment, and requires identified funding.

**Environment**

Today is often referred to as the Information Age, or the Knowledge Age, with knowledge workers as a new form of capital. Ann Okerson describes the current information and technology environment as, “asteroids heading our way—that can come from anywhere, and will get you no matter what you do” (Okerson, 2003). Keeping up in this climate of the unexpected is impossible to do.

The American health care system is now more than a trillion dollar business, yet is challenged to demonstrate quality in terms of health care. Two reports by the prestigious Institute of Medicine’s (IOM) Committee on Quality Care in America have direct importance to the health information professionals: *To Err is Human: Building a Safer Health System* (IOM, 1999) and *Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century* (IOM, 2000). The IOM committee asserts that health care must be safe and of high quality. However, all too frequently it falls short in its ability to translate knowledge into practice and to apply new technologies safely and appropriately.

The IOM reports that at no time in the history of medicine has the growth in knowledge and technologies been so profound. This makes the resulting *quality gap* more alarming, with “health care characterized by more to know, more to manage, more to watch, more to do and more people involved in doing it than at any time in the nation’s history” (IOM, 2000). The IOM describes at length the widely scattered biomedical literature, with varying quality, and the need for “a greater role for specially trained clinical librarians to assist clinicians in framing clinical questions and identifying the relevant literature” (IOM, 2000). One recent innovative solution to delivering quality health information to the right person and at the right time is *information therapy*, or providing information prescriptions for patients as a reimbursable expense (Zablocki, 2003).

## The “I Word” Definition and Background

In *Annals of Internal Medicine*, June 2000, Davidoff and Florance propose the need for a new health professional: an informationist (Davidoff, 2000). They argue that physicians have always been obligated to base their decisions on solid evidence, yet in reality most physicians still don’t regularly search the medical literature. They note the published evidence that is scattered throughout the literature, the inadequate electronic indexing, and the “complex and arcane” techniques of searching (Davidoff, 2000). Furthermore, using current electronic search systems, finding and selecting literature-based data to solve a single patient-related problem can easily require more than an hour. Physicians do not have time to do this, nor judge the quality of the literature found and then extract the essential information from it using critical appraisal. Though the clinical librarian “on rounds” has proven to be efficient and effective model, it is not widespread...no doubt due to lack of funding!

From this context, the need for a new professional emerges: clinical knowledge workers or informationists. A national program is recommended that should be modeled on the experiences of clinical librarians to train, credential and pay for the services of information specialists. Four general principles should guide development of the concept:

1. A clear and solid understanding of both information science and the essentials of clinical work, with a standard curriculum; one may begin in either domain;
2. The practical, working skills of retrieving, synthesizing and presenting medical information and the skills of functioning in a clinical care team must be learned;
3. Training programs that are accredited and graduates certified nationally;
4. Should answer directly to clinical directors and chiefs of staff, and their services should be paid for directly.

In sum, this is a concept whose time has come (Davidoff, 2000).

The reaction of the national and local medical library communities was quick and widespread. By fall 2000 the Philadelphia Regional Chapter hosted a symposium with presentations later published as part of the January 2002 issue of the *Journal of the Medical Library Association*. Detlefsen and Hersh highlighted the education and training of informationists---one from a library school point of view and the second from an informatics training view (Detlefsen, 2002; Hersh, 2002). At the same time, the Board of the Medical Library Association (MLA) established an Informationist Task Force with a charge to explore the concept via an invitational conference. The conference was funded by the National Library of Medicine and held at the Lister Hill Center in Bethesda. Key documents from the April 4-5, 2002 conference were posted on the MLANET at <http://www.mlanet.org/research/informationist.html>. In May 2002, MLA sponsored a live Web discussion with the authors that remained “open” for comments through December 15, 2002. Two chapter roundtables and an open forum were held at the annual meeting of the association in Dallas. A report from the conference was published in the October 2002 issue of the *JMLA*, along with an editorial that provided a two-year assessment of the concept. A bibliography continues to be updated as an action plan evolves for the MLA (<http://mlanet.org/research/informationist/reading.html>).

## Local Environment

New York Medical College (NYMC) is a private free-standing, graduate biomedical university in Valhalla, New York. Its mission is “Advancing your health through medicine, science and education.” (NYMC, 2003) NYMC grants doctoral and masters degrees in the Schools of Medicine, the Graduate School of Basic Biomedical Sciences, and the School of Public Health. The Medical Sciences Library (MSL) provides academic and clinical support in a highly enterprising environment to approximately 6500 faculty, employees, students, fellows, and residents at more than 20 clinical locations and primary care preceptor offices, both locally and remote. Library resource requirements are complex, distributed after intense competition for funding and demonstrated need. The library presents its resources, services and facilities both physically and virtually, locally and remote via the home page at <http://libray.nymc.edu/>.

Since 1994, the MSL staff completes annual goal setting, with objectives culled from accreditation requirements, academic priorities, and faculty initiatives. The current MSL Plan for Services FY2003 lists, “Exploring the implementation of an informationist concept” as a potential strategy to Goal II that supports the university efforts to prepare students to become independent, life-long learners (MSL, 2003). The associate dean and director of the MSL is a member of the Education and Curriculum Committee, the Provost’s Council, and the Faculty Senate Library and Academic Support Committee (LASCOM). The senior associate dean of Undergraduate and Graduate Medical Education current chairs the Education and Curriculum Committee. All deans are ex officio members of the LASCOM. It is noteworthy that the senior associate dean of Undergraduate and Graduate Medical Education was an invited speaker at the invitational conference representing medical school curriculum needs. Once oriented, he enthusiastically embraced the informationist concept.

## Goals/Objectives

The purpose of this paper is to describe the exploratory process to test the “I concept” at New York Medical College by professional library faculty and an outside consultant. A consultant was hired to complete a feasibility study to objectively identify local opportunities, formulate a definition of the concept at NYMC, develop some potential contexts for further study or implementation, and identify potential sources of funding. Specific objectives included:

1. Complete an internal assessment of functional staff skills needed for clinical library outreach services;
2. Explore the application of the concept to more remote NYMC library users;
3. Identify funding opportunities to establish or expand the existing NYMC liaison program;
4. Complete a grant application to develop and establish an operational program to provide these services.

## Methodology

Since 1998, NYMC information services (IS) librarians have provided information management education and outreach with liaison responsibilities to programs and schools. In 1998, a new coordinator position was created to better foster an educational liaison program with assigned contacts. This plan was relatively reactive, with little spurts of interest by faculty. By 2002 with 4.0 FTEs and 6500 potential library users, the liaison:user ratio of 1:1622 made it clear that if the informationist concept were to be explored, an expert external consultant was critical. Under direction of the head of Information Services and the library director, a consultant was hired beginning July 2002 for thirteen weeks. This was later extended through January 2003, because the extent and time required for completion of the objectives were far too ambitious for a short-term study.

This feasibility study included two basic components: an internal assessment of informationist skills needed and an external assessment of potential partners and models.

The internal assessment consisted of training and evaluation of current staff, using the context of clinical librarianship and the related principles of evidence-based medicine as a context. Reference librarians, who had at this point no experience with clinical outreach, were provided with insight into what to expect as a librarian in a clinical setting, including gaining entry as well as relevant search techniques for on-the-spot information retrieval. Clinical scenarios were used, and librarians were given assignments to devise clinical questions based on a scenario and to find the best evidence available to answer their clinical questions. Additionally, the consultant provided the reference staff with an introduction to medical terminology. Training sessions with the reference staff occurred weekly. The sessions lasted approximately one hour. These sessions gave the consultant the opportunity to train as well as to assess.

The external assessment consisted of an environmental scan—learning about the institution and discussions with key contacts. The head of IS began attending morning report with the assistant program director in Internal Medicine, who introduced her on day one as an "informationist" and who has embraced the concept. In this role she has attended once weekly for eight months, has listened to patient cases, and has assisted residents in finding literature to support patient care decisions. Support has included supplying articles and information, as well as supplying instruction so the residents can better find the information on their own.

External interviews were limited to the academic core campus in Valhalla and Westchester Medical Center, adjacent to the university campus. The consultant worked on average 12 hours/week, on Wednesdays and Saturdays. Wednesday morning staff training sessions (1.5 hours) were scheduled with the IS librarians. Wednesday and Thursday morning reports were attended by the head and the consultant whenever workable. Morning reports largely involved a resident presenting a case from the previous night intake. Interviews with key positional leaders were scheduled with the head and the consultants. Meetings were held with the deans of all three schools, senior associate dean of Undergraduate and Graduate Medical Education, two vice chairs of the Department of Medicine, chairs of Epidemiology, Informatics, chairman of LASCOM, and interested faculty in Pharmacology.

# Results

Overall results indicated that both internal library staff and external positional leaders were supportive of the value that informationists might bring to further their own university programs. The internal assessment and training of IS librarians resulted in increased understanding of the concept and a willingness to actively promote a real pilot program. The IS skills needed include additional subject expertise in context, expert information search, retrieval, and critical appraisal skills... particularly using evidence-based techniques, and effective participation as an integral part of a team. The latter most definitely requires active listening skills and confidence to present “in action” as needed by the team. Each IS librarian has outlined his own approach to skill development.

The external assessment/development of willing partners centered on approximately a dozen interviews. The list of potential partners was identified during brainstorming sessions with the head of IS, the library director and the consultant. Previous and current liaison reports were reviewed. Interviews were selected then scheduled from lists of senior administration for the university, to include deans, department chairs, program directors and clerkship directors.

The authors of this paper spent much time discussing what the concept of informationist would mean locally at New York Medical College. The consultant, as has been mentioned, has a background in clinical librarianship, and focused largely on the clinical aspect of the concept, while the director and the head of Reference and Information Services, strove to broaden the local definition to potentially include all programs and departments of the college.

The expected study outcomes included definitions of what an informationist would look like at NYMC. These must be considered preliminary, given the scope and nature of our exploration.

- An informationist in the **School of Medicine** would be a clinical librarian trained in teaching and applying evidence-based medicine techniques and critical appraisal on rounds, morning report, and special consults. Proactive membership on the clinical team with subject expertise in the specialty is expected. Reimbursement at per hour rates should be established from the beginning *a la* the National Institutes of Health (NIH) model.
- An informationist in the **School of Public Health** would be trained in health policy, health education, or biostatistics and epidemiology, informatics, preferably with at least a Masters in Public Health. This person would develop public health programs, tools, “train the trainer” courses or activities for health practitioners. Coordinating student interns would be expected.
- An informationist in the **Graduate School of Basic Biomedical Sciences** would serve as an research team member, a “bench informationist,” have solid content expertise, coordinate and assess documentation for research proposals, design study protocols, document study results and locate useful relevant other protocols and results.

Based upon the study, pilot models can be further developed in all three schools. In addition, the Office of Graduate Medical Education would like their own *three* informationists to develop tool kits for the over one hundred residency programs and 1330+ residents who are sponsored by the university.

Objectives to identify funding opportunities and to complete a grant application were only briefly addressed. The lack of time was a major problem. Scheduling time with busy people proved to be a major problem. It was clear from the beginning that 13 weeks was not long enough, and 26 weeks still left much to be done. By January 2003 it was agreed that a grant proposal would be the next step, with a more complete schedule and outline to be developed now that the pioneers are identified.

# Conclusion

These results must be considered preliminary for NYMC. What is needed is a carefully designed pilot program with at least four applications. This is a small project like “the little engine that could.” The library staff and consultant have cultivated serious enough interest for at least one application in each setting: clinical medicine, basic medical sciences, public health education, and graduate medical education. The library IS staff is enthusiastic, though guarded and overloaded...just like our health practitioners! The feasibility study was a success, although formal definitions for each setting must remain conceptual. Perhaps a measure of our success in terms of recognized *value added* is the request from the chair of the Education and Curriculum Committee to distribute the library’s revised liaison plan for vertical and horizontal integration throughout the curriculum of the NYMC. The new and revised liaison plan requires a commitment on the part of the IS librarians to immerse themselves in their assigned content areas. This effort will make them more capable and closer to the Davidoff and Florance model. Not surprisingly, the informationist concept is evident in the plan!

For the NYMC Library, we have done what Rodger recommends, “In fact, the current global economic climate with tremendous growth and development of environment challenges all library professionals to demonstrate their vision and value through renewal and reinvention” (Rodger, 2002).

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