

## **Limbs and Spills: the use of a Clinical Librarian in supporting Orthopaedic Surgeons in the research process**

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### **Introduction**

This paper describes how the concepts of Clinical Librarianship and the need to increase information literacy in the Department of Orthopaedics Surgery in PUC-Campinas are developing symbiotically.

Publish or perish? This is question that surrounds the growing and continuing demand of the communication process for scientific publication and dissemination of research results and best practices of healthcare. This is established and accepted as a *modus operandi* in the medical field and usually considered a necessary part of professional education and training. Additionally health service providers are increasingly in search of answers about cost, efficiency and safety of health procedures. The dissemination of research and medical practice is also essential for several other reasons, including to secure national and international funding, for continued development of research activities and to expand visibility, impact and recognition of a research group or an individual researcher.

For health professionals the visibility and recognition of their expertise often depends on the appropriate publication of their research, particularly in academic and scientific journals which hold a high impact factor and are by definition therefore internationally recognized.

Creating relevant research outputs for publication is only the first step for the health professional, accessing, using and understanding the vast body of medical literature is the second step and as big a challenge. However this is considered necessary and acceptable medical practice in 2010 worldwide. Associated with the explosion of medical literature is the requirement for the health professional to secure the ability to integrate scientific evidence with clinical experience; i.e.; to follow and use the principles of evidence-based medicine (EBM). Clinical practice based on the use of evidence can be described as an operative approach in which the physician uses the best available evidence from the literature, in agreement with the patient, to decide on case prognosis and treatment, the emphasis being on effectiveness and the availability of health resources. (Sackett et al 1996).

It is readily acknowledged in the literature, however, that health professionals, especially physicians, find it difficult to make time in their everyday practice to adequately undertake EBM; they lack the time to perform literature searches and easy access to the relevant databases; they also lack the requisite training to achieve satisfactory competence. The expertise necessary to assist the medical profession to

undertake EBM resides with Librarians and information professionals prepared to work with the evidence and the theoretical framework in which it operates. (Sargeant and Harrison, 2004; Ciol and Beraquet, 2009).

### **The Brazilian Context**

The city of Campinas, in São Paulo State, Brazil has a population of approximately 1 million in the metropolitan area and 19 surrounding towns. There are two teaching hospitals (Unicamp and PUC Celso Pierro Hospital and Maternity) and one other non teaching hospital to provide secondary services for this population.

The medical professionals working in these hospitals perform a highly complex set of activities, ranging from the delivery of medical treatments and other activities to provide health services to the community usually associated with the activities of teaching hospitals. (Marinho, 2007). In all aspects of research and teaching but particularly in medical education these professionals need to use the best available evidence.

In 2008 there was a recognized need to increase the profile, the research activity and publication rate amongst surgeons in the Department of Orthopaedics, University Hospital of PUC-Campinas (Hospital and Maternity Celso Pierro) in Campinas, Sao Paulo, Brazil.

Independent of this initiative, but following the same objectives, the Building the Brazilian Bridge (BBB) Project was established in 2005 to develop a Clinical Library service in São Paulo State, using as the parameters the British experience in this field. Brazilian Librarians working in the health sector are mainly based in the university medical libraries.

The Clinical Librarian in the United States and some European countries equates to the information professionals operating out of the physical space in libraries and integrating into the multidisciplinary teams at hospitals. There are several models of Clinical Librarianship that demonstrate this practice. (Harrison and Beraquet, 2009).

This professional library work in clinical teams provides physicians and other team members with scientific information to enable them to make better decisions for patients ultimately helping to improve the health of the population. The Clinical Librarian investigates the information needs of the medical professionals, finds and classifies information resources to enable clinicians to find the most appropriate treatment to the patient.

To undertake EBM basically the actions of a trader must be used based on the following objectives: a) access and use of evidence-based information on clinical effectiveness (systematic review), b) identify the information needs of health professionals to make decisions with empirical (opinions, experiences) in evidence-based practices. (Beraquet and Ciol, 2009).

According to Ciol and Beraquet (2009), in the case of the Brazilian health system,

Clinical Librarianship can provide assistance for interdisciplinary work for all medical professionals.

To do this the library professional must have the following skills and abilities:

- good working relationship with physicians,
- the ability to ask questions,
- the ability to learn and interest in clinical and scientific issues,
- good use of ICT, to be able to work in multidisciplinary teams,
- collection and processing of strategic information,
- synthesis capacity,
- the ability to training users,
- development of specific information services.

As for the knowledge base required by the Clinical Librarian, it is expected that the following are developed:

- medical terms and descriptions,
- project management,
- experience in searches of databases,
- concepts of evidence-based practice,
- epidemiology expertise,
- research methods used in the medical field.

## **Methods**

In 2008, the Head of the Department of Orthopedics, University Hospital of PUC-Campinas appointed a Librarian. This was a pragmatic and strategic action designed to increase and improve the dissemination of research developed in the Department of Orthopedics and to develop a research culture in the department.

The Department of Orthopaedics Surgery consists of the following groups of specialties: Back, Shoulder, Hand, Knee, Hip, Feet, Paediatrics, Trauma and Oncology, Sports Medicine, Reconstruction of limbs, Elbow. The total number of medical professionals including consultants, residents and medical assistants in the department was 86 in 2008-2009.

The initial brief from the Head of Orthopaedic Surgery to the Librarian was to assist the Surgeons in the production of publications for academic journals. In the first instance this included supporting surgeons in planning and drafting of their research papers, the development of methodological approaches, systematic reviews, and preparing material for scientific publication. Also, training the surgeons to search for the best scientific evidence to support their clinical practice and research.

As part of the strategies of the BBB Project, researchers in the group provided support and training for the Librarian working in the Orthopaedic Department concerning the practice of evidence-based medicine (EBM).

The Librarian was also provided with podcasts of clinical Librarians from the UK talking about their work roles in this area. Evidence of successful practice of Clinical

Librarianship in the UK was also used to explain the role of this professional and present the significance of this work to the Orthopaedic Surgeons of PUC-Campinas.

## Results

Since the appointment of a Clinical Librarian in 2008 a research culture has been formally established in the Department of Orthopaedics, as indicated in figure 1. Data is given for the past two years, it should be noted that data was not recorded in previous years and therefore is unavailable for comparison.

### ORTHOPAEDIC DEPARTMENT RESEARCH ACTIVITY

ACTIVITY	2008	2009
Papers sent to Brazilian Society of Orthopaedic and Trauma Surgery	4	3
Nursing papers	1	1
Submission of abstracts to medical and scientific conferences	15	6
Published papers in national journals	0	2
Published papers in International journals	1	2
Research projects approved by the University Ethical Committee	0	2
Research papers sent to journals awaiting decision	0	1

Figure 1

The initial increase in publication outputs was in the category of conferences contributions. This is understandable as the written contribution to conferences only required an abstract. The members of the department gained skills and confidence by writing and submitting in this area. However, these skills learnt in this exercise are now being built upon and the production of full academic and scientific papers is slowly increasing. The data shows an increase in submission of papers to both national and international journals. This is considered to be the correct focus and pathway for the department to improve their visibility and profile.

The Head of the Department of Orthopaedics is now recognized as a champion in the development of the use of best clinical evidence in treatment of patients and teaching. The continued employment of the clinical Librarian can only strengthen the research culture within the department. This interdisciplinary approach has worked well.

The Librarian is an integral part of the team of Orthopedics and is respected as a professional practitioner in the area of information. The appointment of a clinical Librarian proved a definite advance for the project BBB both practically and professionally.

This is a good example of a university teaching hospital combining teaching and research to practice (Beraquet, Ciol, 2009).

## **Future research**

The project is ongoing and aims to measure, at a later stage of the research, the impact and value of the Clinical Librarian within the Orthopaedics Team from Hospital of PUC-Campinas.

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