

Collaboration between Medical Librarians and Primary Healthcare Physicians: A Roadmap for Enhancing Patient Education within the Sultanate of Oman

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Abstract

Introduction: Patient education, which has become an increasingly central focus of primary healthcare in recent years, has been proven to be associated with improved health outcomes. The nature of patient education is changing: patients increasingly seek out health information online, but these resources are of variable quality. Physicians are faced with information overload, which hinders their ability to develop high-quality patient education. Drawing on best practice examples from the literature, the importance of collaboration between medical librarians and primary healthcare physicians in enhancing patient education is discussed. Best practice examples of collaboration between medical librarians and primary healthcare physicians are identified and key learning are extracted. A recommended roadmap for the Sultanate of Oman to follow is set forth.

Method: The paper is based on a review of relevant literature, conducted online using a range of keywords and search terms relating to the topics of interest. Databases of peer-reviewed academic research articles were included in the searches as well as general search engines.

Results: This paper highlights the likely benefits of collaboration between these groups, providing examples of how collaboration can work in practice. A roadmap process is developed as a recommended framework for implementing a collaboration strategy between these professional groups.

Implications: The suggested roadmap for collaboration between medical librarians and primary healthcare physicians is likely to help Oman become a model of best practice primary healthcare among developing countries. The content of the paper will also be of interest and value to medical librarians and healthcare providers, not only in other developing countries, but also worldwide, since few countries have succeeded in achieving successful collaboration between these groups.

Keywords: Sultanate of Oman, Patient Education, Collaboration, Medical Librarians, Primary Healthcare Physicians, Roles of Medical Librarians, Roles of Physicians, Collaboration Roadmap.

Introduction

Patient education has become an increasingly central focus of primary healthcare in recent years, in the Sultanate of Oman (Jabr & Al-Harrasi, 2010) as well as in other developing and developed countries (Behar-Horenstein et al., 2005; Washburn, 2005). The efficient delivery of primary healthcare relies heavily on high quality patient education, which not only improves the overall health of the population (Behar-Horenstein et al., 2005; Joint Commission on Accreditation of Healthcare Organizations, 2007), but reduces the resource burden on the healthcare system by enabling patients to participate more effectively in the management of their own health (Washburn, 2000).

Traditionally, patient education resources consisted mainly of printed leaflets handed out by physicians during patient consultations (Washburn, 2000). At present, many patients take a more proactive role in seeking out health information from the wealth of resources available online. Within the United States (U.S.), for example, recent survey findings from the Pew Internet and American Life Project revealed that 59% of all adults had looked for health information on the Internet within the previous year (Fox & Duggan, 2013). Though patients may be better informed about health and medical conditions than in the past, the ready availability of online information can also create problems for the primary health sector, since online information varies considerably in terms of quality and accuracy and may be misleading (MacDonald, Winter, & Luke, 2010). Information overload from the vast volumes of medical resources constantly being generated also create difficulties for primary health physicians, who often lack the time and training to evaluate and select the most appropriate data to inform their patient education activities and to effectively practice evidence-based medicine (Porumbeanu Madge, 2012).

In this context, there is a strong case for collaboration between primary healthcare physicians and medical librarians, with the physicians contributing specialist medical knowledge and the librarians offering expertise in information collection, management, and evaluation, among other relevant skills. Oman has an opportunity to learn from the experiences of other countries in order to enhance patient education and strengthen its primary healthcare sector by adopting this strategy. Drawing on best practice examples from the literature, this article discusses the importance of collaboration between medical librarians and primary healthcare physicians in enhancing patient education, and sets out a recommended roadmap for the Sultanate of Oman to follow in order to achieve this effectively.

Scope and Objectives

The paper draws on the findings of relevant literature to demonstrate the importance of collaboration between medical librarians and primary healthcare care physicians in enhancing patient education and to develop a roadmap for this form of collaboration in the Sultanate of Oman, based on a review of relevant literature and best practice models. The paper is not intended to recommend a specific model of collaboration between medical librarians and primary healthcare physicians in Oman, since this should be developed based on the shared expertise and knowledge of these professional groups and other key stakeholders in the primary healthcare system. Instead, the paper is intended to inform this process through identification of best practice examples and other relevant findings from the literature, to recommend and set out a roadmap process for determining the goals of collaboration by identifying the most suitable model, and to develop realistic and achievable action steps for its implementation. The paper has the following objectives:

1. To highlight the reasons why patient education is important in primary healthcare and to examine the respective roles of medical librarians and primary healthcare physicians in this area.
2. To identify best practice examples of collaboration between medical librarians and primary healthcare physicians and key learnings from these.
3. To propose a roadmap for developing and implementing collaboration between medical librarians and primary healthcare physicians to enhance patient education in Oman.

Significance of the paper

One of the main priorities of Oman's Ministry of Health is the development of a high quality primary healthcare system. Already, a great deal has been achieved: between 2008 and 2012 the number of institutions providing primary healthcare increased from 167 to 206, and more than 85% of the population now has access to their services (World Health Organization, Regional Office for the Eastern Mediterranean, 2012). Library and information services are seen as central to the development of a robust healthcare system in Oman, and there are many specialized medical libraries providing services to medical and research staff and to patients and the public. In general, medical librarians play a support role in this system, including the primary healthcare sector, and there is little evidence of active collaboration between this group and primary healthcare physicians (Jabr & Al-Harrasi, 2010).

In Oman, as in other countries of the developing world, there is a pressing need to expand access to high-quality primary healthcare to all sectors of the population; in order to do so the healthcare system must make effective and efficient use of available skills and resources, and focus on

evidence-based medicine. The suggested roadmap for collaboration between medical librarians and primary healthcare physicians is likely to help Oman achieve these goals and become a model of best practice primary healthcare among developing countries. The content of the paper will also be of interest and value to medical librarians and healthcare providers, not only in other developing countries, but worldwide, since few countries have succeeded in achieving successful collaboration and integrated working between these groups.

Methodology

The paper is based on a review of relevant literature, conducted online using a range of keywords and search terms relating to the topics of interest. To identify a wide variety of relevant literature, databases of peer-reviewed academic research articles were included in the searches as well as general search engines. The main objective was to identify published information about models of successful collaboration between medical librarians and primary healthcare physicians, especially in the area of patient education, and to use the key findings of the review to develop a recommended roadmap for the use of this approach to enhance patient education in Oman.

Primary healthcare and the importance of patient education

According to the World Health Organization definition, primary healthcare is the "first level of contact of individuals, the family, and community with the national health system" (WHO, 1978, p. 2). The term has also been used more broadly to refer a system based on "continuing care, accessibility, community involvement and collaboration between sectors" (Australian Government, Department of Health and Ageing, 2009, p. 22). This broad conceptualization of primary healthcare is reflected in the World Health Organization's 2008 report *Primary Healthcare now More than Ever*, which stresses the

importance of integrating primary healthcare with public health policies in order to maximize positive health outcomes. Within this context, patient education and consumer health information play a crucial role. These help to raise awareness of preventative health and provide patients with access to accurate and reliable information, which enables them to participate effectively in the management of their own medical conditions. There is a proven association between patient education and improved health outcomes (Behar-Horenstein et al., 2005; Joint Commission on Accreditation of Healthcare Organizations, 2007).

Patient education is defined as a planned activity initiated by a medical professional with the objective of improving health behavior and compliance with treatments (Medical Library Association, 1996). Consumer health information is a more generic category of health resources that includes the vast amounts of information now available online that is generated from a wide range of sources. In practice, the boundaries have become blurred, since many patients now seek information online about their own conditions and treatment. An important difference is that the accuracy and reliability of online information cannot be verified; much of it is of low quality, with the potential to harm rather than help patients (The Virginia Council of Health Services Librarians (2004). Patient education, on the other hand, is generally based on authoritative sources that have been professionally verified for their scientific validity and appropriateness of use.

The role of primary healthcare physicians in patient education

Primary healthcare physicians have always played a central role in patient education, but until recently, this was largely confined to providing patients with printed guidance about managing their condition and treatments (Washburn, 2000). In the current healthcare environment, many patients seek

medical information online and take a more active interest in obtaining information to manage their own health (Dismukes, 2009). For this reason, primary healthcare physicians need to play a more active role in ensuring that patients can access high quality, evidence-based medical information, and can interpret and use this effectively in managing their own health.

Primary health physicians also have a responsibility to ensure that their own practice uses the most up-to-date and reliable evidence and incorporates this into patient education. At community level, they have an important role as professional contributors to the development or validation of patient education resources. But physicians themselves face an ever-increasing problem of information overload, and many have little time available to keep abreast of developments in research and published information (West, deBronkart, & Demetri, 2010). This is especially the case at the primary healthcare level, where there is a need for breadth of knowledge across a wide range of medical areas. Moreover, many physicians lack the technological and specialist information management skills that are necessary for navigating and keeping up to date with the vast amounts of medical information that are constantly emerging (Shearer et al., 2002).

The role of medical librarians in patient education

Many researchers have documented the increasingly important role of librarians in the primary healthcare environment (e.g. Dismukes, 2009; Porumbeanu Madge, 2012; Shearer, Seymour & Capitani, 2002; Zipperer, 2004). As indicated above, managing the medical information now available and ensuring that patient education is grounded in up-to-date, reliable evidence is beyond the capabilities of many primary healthcare physicians. They therefore rely on medical librarians' combination of information management skills, substantive knowledge of the healthcare

environment, and ability to monitor these effectively in order to inform patient education and evidence-based practice (Williams & Zipperer, 2003).

Beyond this, medical librarians are becoming more directly involved in patient education as the boundaries between this and consumer health information increasingly overlap, and as patients seek to educate themselves through readily available medical information (). Librarians can play an important role in the development of high quality educational materials for public use since they are skilled in identifying and accessing relevant sources of information and evaluating its quality (Gavgani, 2011; MacDonald, Warner, & Procaccino, 2004; Weldon, 2005; Winter & Luke, 2010). As Dismukes (2009, Conclusion) noted, the key skills of medical librarians include the ability to "process and distill the information so that it is useful to the end user," and a "service orientation" that helps ensure that information is made available where needed. Through their networks of professional contacts including public librarians, they can play a leading role in the dissemination and marketing of this material direct to patients and the general population. In addition to their more traditional information management and information dissemination responsibilities, medical librarians' other key patient education roles, include health literacy advocacy, education, and research (Medical Library Association, 1996). However, medical librarians cannot validate the scientific accuracy or reliability of the information itself; this requires the input of qualified medical practitioners (Medical Library Association, 1996). For this reason, collaborative approaches are gradually emerging as an strategy in patient education.

Examples of collaboration between medical librarians and primary healthcare physicians

The literature search revealed few examples of formal collaborations specifically involving medical librarians and primary healthcare physicians for

enhancing patient education. A number of other interesting and useful examples of collaborations between librarians and healthcare professionals are included in the following summary.

1. Personal Education Plan (PEPTalk) project, Canada, 2005-6

Physicians, librarians, and other stakeholders participated in the Personal Education Plan (PEPTalk) research project at the University Health Network's Princess Margaret Hospital in Canada. The objective was to design a web-based health information resource system for use by both patients and medical professionals. The project focused on developing tailored, culturally relevant resources for people with chronic illness. Librarians were involved in most stages of the work. Their responsibilities were partly traditional, such as conducting literature searches, evaluating the quality of resources, and categorizing information. They were also involved in non-traditional ways. For example, their knowledge of information-seeking needs and behaviors was used to inform the iterative design of the system to facilitate its use by different groups, and they played a central role in educating physicians and patients about information and health literacy (MacDonald, Winter, & Luke, 2010).

2. Health Information Referral Project, United States, 2003-4

In the U.S., the American College of Physicians Foundation (ACPF) and the National Library of Medicine (NLM) collaborated in the development of the "Health Information Referral Project" (HIRP), intended to provide physicians with resources and tools to guide their patients to the high quality online medical information site Medline Plus. Just as they traditionally write a prescription for medicine, under this initiative, physicians used a prescription notepad to provide instructions for accessing Medline Plus from their home or a public library (Jones & Shipman, 2004; The Virginia Council of Health Services Librarians, 2004).

3. Collaborative project initiated by the Process Improvement Team of the University of Pittsburgh Medical Center (UPMC), United States, 2002-3

In Pennsylvania, librarians collaborated with other healthcare staff on a project designed to enhance patient recovery using educational videos. Librarians played a central role in this initiative by facilitating the selection of an appropriate video for home viewing and by managing the preparation, distribution, and control of the educational resources. The project evaluation demonstrated that the involvement of this group had saved valuable medical staff time, which could be directed instead to patient care (Klein-Fedyshin et al., 2005).

4. A collaborative project of the Consumer Health Committee of the Georgia Health Sciences Library Association, United States, 1999.

Librarians from medical schools in the state of Georgia were invited to author parts of a Patient Education and Preventive Medicine textbook, in a collaboration overseen by the Consumer Health Committee of the Georgia Health Sciences Library Association. In doing so, librarians became an integral part of the healthcare team responsible for producing the book. The project benefited from their skills and expertise in locating and evaluating relevant information resources (LaBeause et al., 2003).

5. Information services based on a librarian-user partnership in medical clinics, Bucharest, 2012

In Bucharest, a proposed model was developed integrating librarians into clinical teams that provide health services and education to patients (Porumbeanu Madge, 2012).

From these examples and other literature, some emerging models of collaboration between physicians and medical libraries can be summarized as follows:

- Development of education resource systems. Physicians contribute specialist knowledge to inform or evaluate scientific content development, and librarians draw contributing knowledge and expertise of information resources, system design, and user information-seeking behaviors.
- Joint development of patient education resources. These include books, leaflets, or videos, that draw on the subject knowledge of physicians and the information selection, evaluation, and synthesis skills of medical librarians.
- Distribution and control of patient education resources by librarians following development or selection of these by multi-disciplinary groups.
- Information dissemination at the point of care. In this model, librarians work alongside physicians and other healthcare workers to ensure that patient education is based on best available evidence and is appropriately tailored to patients' needs and requirements (Gavani, 2001).

Professional collaborations are not without their difficulties and challenges, particularly given the different perspectives and professional cultures involved (e.g. see Treat, 2008), and the time and effort required of the respective professional groups to ensure the success of the collaboration. In developing countries, resource limitations as well as inadequate technologies can often hinder progress. For example, within Oman, research with medical librarians found that the research participants were willing to collaborate with health professionals, but that their libraries lacked sufficient technological, telecommunication, and human resources to be able to establish such arrangements (Jabr & Al-Harrasi, 2010).

Lessons can be learned from the literature (e.g. Dunn et al., 2006; MartinMisener et al., 2012; Treat, 2008) about the critical success factors that

need to be addressed when developing collaborations within healthcare. These include:

- The establishment of structures and processes to facilitate the collaboration
- Government support, if appropriate
- Adequate funding and resources
- Adequate technological and communications infrastructure
- Shared purpose and common objectives
- Agreed governance and leadership arrangements
- Appropriate skills and expertise
- Effective communications and information sharing
- Ongoing education and training
- The ability to develop and sustain trust between partners
- Expertise in relationship management.

A roadmap for Oman

In order to promote and facilitate collaboration between medical librarians and primary healthcare physicians in Oman, a roadmap process approach is recommended in this paper. The roadmap will be important as a means of improving patient education and health outcomes. In addition, it will help to improve efficiency within the primary healthcare sector by ensuring that the collaboration builds on the skills and expertise of medical librarians as well as physicians.

The roadmap process approach has been defined as "a means to connect vision, values, and objectives with strategic actions that are required to achieve those objectives" (Technology Futures, Inc., 2005, p. 1). Originally developed within the business and technology context, the concept is increasingly being adopted within healthcare, owing to its value in providing a coherent framework and guidance for developing and implementing initiatives and

programs that involve new ways of working between key stakeholder groups. Developing a roadmap involves building up from a base in which the vision and mission of the initiative are formalized, identifying the key capabilities and other requirements for success, and then developing specific projects, plans, and an implementation process (Figure 1).

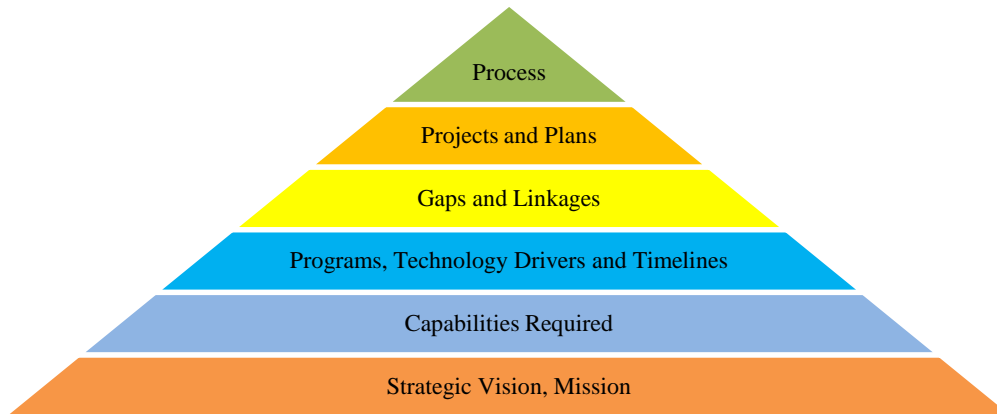


Figure 1. Stages of Roadmap Development (reproduced from Technology Futures, Inc., 2005).

The roadmap process is used to define the specific goals and timelines of the initiative, as well as the action steps and implementation activities that are proposed for achieving these (Technology Futures, Inc., 2005). The components of the proposed roadmap for enhancing patient education in Oman through the collaboration of primary health physicians and medical librarians are shown in Figure 2. This builds on best practice in strategic planning as well as the critical success factors in healthcare collaborations identified in the previous section. It is intended to help guide the process of developing and implementing collaborative activities between these groups.

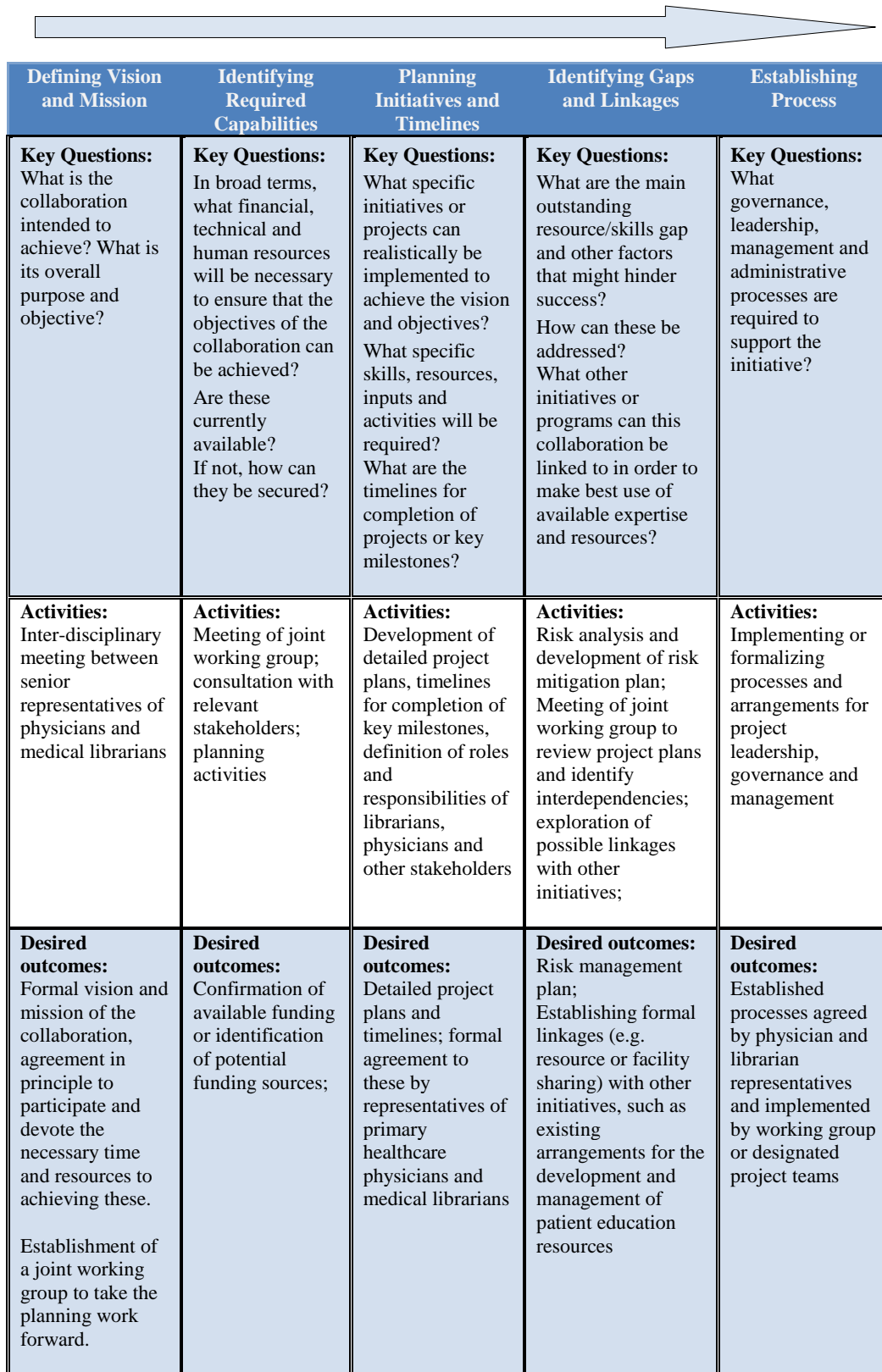


Figure 2. Proposed Roadmap.

Conclusion and Recommendations

The development of high-quality patient education in Oman is likely to help to promote positive outcomes among the population while reducing the resource burden on the primary healthcare system. Oman has made excellent progress to date in expanding primary healthcare, yet the potential benefits of this system may not be fully realized if there is a lack of collaboration between physicians and medical librarians in developing and implementing patient education. This paper has highlighted the likely benefits of collaboration between these groups, provided examples of how this can work in practice, and set out a proposed roadmap to guide the groups in developing a realistic and achievable collaboration strategy.

In summary, it is recommended that, within the Sultanate of Oman:

1. Medical librarians and primary healthcare physicians should collaborate in the area of patient education to improve the availability and quality of available resources and enable patients to participate more effectively in the management of their own health.
2. Best practice models of collaboration between medical librarians and primary healthcare physicians should be considered by these groups for adoption or adaptation in the Sultanate of Oman.
3. The proposed roadmap presented in this paper should be used as an initial framework for implementing a collaboration strategy between these professional groups.
4. Going forward, the specific collaboration strategy and initiatives should be based on the shared expertise and knowledge of these professional groups and other key stakeholders in the primary healthcare system.

5. Critical success factors that should be addressed in developing a collaborative strategy include establishing adequate structures and processes to facilitate the collaboration, and securing necessary government support, funding and resources.
6. Once a collaboration strategy and model for patient education has been established in Oman, this should be evaluated and the findings used to position Oman as a model of best practice primary healthcare among developing countries.

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