Health Librarians Making a Difference in a Health Care Setting: The Chitambo Emergency Care Communications Project.

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ABSTRACT

Health librarians in the role of a knowledge broker can encourage health care workers to use evidence based health information. The knowledge broker role is an intervention dedicated to translating knowledge into action originating from the evidence-based medicine campaign. The Chitambo Emergency Care Communications Project through its knowledge component work strand has visualisations of converting knowledge into action to improve emergency care response by health workers, through the implementation of the knowledge broker role for health care workers in Chitambo district, Central Zambia. Implementation of the knowledge broker activity for Chitambo adopted a framework purposefully designed to build capacity for health librarians by the National Health Service Education for Scotland. The knowledge to action model can be useful in providing the relevant information to improve patient outcomes for healthcare workers. These knowledge gaps can be alleviated by knowledge brokering as it straddles through any knowledge gaps between the health workers’ knowledge and their service delivery practice.

Keywords: Decision support; Knowledge mobilisation; Health librarians; Evidence-based health information; Knowledge broker, Zambia
Introduction

The knowledge brokering strategy thrives on the use of information professionals acting as knowledge brokers to promote the practice of evidence informed decision making by health care workers (Robeson, Dobbins, & Decorby, 2008). Health care workers uptake of recommendations from results of health research is usually slow or non-existent, creating a huge gap between research and practice (Ward, House & Hamer, 2009a). This situation has prompted some policy changes worldwide so as to identify suitable systems that “could be used to transfer knowledge from healthcare research into what is done in healthcare practice” (Ward, House & Hamer, 2009b). These systems are a means of facilitating the transfer of knowledge from healthcare research into healthcare practice; and therein lies the growing recognition of the use of knowledge brokers in the process (Glegg & Hoens, 2016).

The term knowledge broker may refer to individuals, teams or organisations that embark on interventions to steer processes meant to transfer knowledge (Elueze, 2015); in this case it refers to a health librarian. Health librarians play a knowledge broker role by being the link between the producers of knowledge and the users of that knowledge. Therefore, implementing a knowledge brokering systems by health librarians in African health care settings has the potential to being an enabler to health information provision, especially if carefully, targeted towards the sparse number of doctors and other cadres of the health care workers in rural hospitals, clinics and health centres.

The year 2015 saw the commencement of a movement towards achieving the translating of knowledge into action for use by health care workers in their frontline care practice at Chitambo District Hospital and its surrounding health centres in rural Central Zambia. According to the Zambia National Health Strategic Plan 2017-2021, rural Zambia is primarily characterised by poverty with the majority of the people living below the poverty line; which has been estimated at 76.6%, compared with 23.4% of people in the urban areas (Zambia Ministry of Health, 2017). The major cause of morbidity and mortality is still Malaria. Additionally, the country had an HIV prevalence estimated at 13.3%, therefore making Zambia one of the most affected countries in the world. On the other hand, the report points out that the current emergency health services are not very effective hence the need for them to be strengthened (Zambia Ministry of Health, 2017); and information provision for health care workers can play a prominent role in supporting Zambia’s health systems. Zambia’s health care situation has not really changed; as in 2003, when Zambia was rated as one of the many poor countries in Sub Saharan Africa, with rural health care settings that were characterised by poor infrastructure and a scarcity of doctors and medical supplies (Hjortsberg, 2003). Developments in nursing and midwifery are ever changing rapidly, with increasing client or patient expectations and service needs. In order to tackle “this ever-increasing demand and dynamism of nursing and midwifery, there is need for a pragmatic shift towards innovation, productivity, and improved efficiency” (Zambia. Ministry of Health, 2017, p. 59). Initiatives such as knowledge brokering therefore plays a vital role in supporting evidence based information for front line health professionals like nurse. Suffice to say, health care workers in rural communities in Zambia are in need of better health information and knowledge sources as the absence of this has ramifications on the quality of their service delivery (Chanda & Shaw, 2010). This lack of information for healthcare delivery has been well documented (Kanyengo, 2008; Kanyengo & Hoppenbrouwer, 2007a; Monde, Akakandelwa, & Kanyengo, 2017). Some of the challenges faced by health care workers in accessing health information for use in their clinical practice are well articulated (Kanyengo & Hoppenbrouwer, 2007a, 2008; Monde, Kanyengo, & Akakandelwa, 2017).
Knowledge broker interventions by health librarians have the potential to meet some knowledge needs of health care workers, which will in turn help them deliver better health care services thereby aiding the meeting of some of the targets of Sustainable Development Goal (SDG) 3 of: Ensuring healthy lives and promoting wellbeing for all at all ages. This supports assertions by Mamtora and Pandey (2018) that a librarian’s role culminates in facilitating access to information for individual or institutional use; and therefore effecting attainment of SDG goal 3 of ensuring health lives and wellbeing of all. To this effect, the International Federation of Library Associations and Institutions (IFLA) has appealed to like-minded stakeholders in the development arena to acknowledge that, libraries all around the world are dependable structures for nurturing SDGs accomplishment (International Federation of Library Associations and Institutions, 2019). Hence, libraries as institutions through their librarians can proudly acclaim the key role they are playing in achieving SDGs. Health librarians in particular are partners in the process of fostering the attainment of SDG 3 in the health sector, for they can source the right kind of evidence based information that could advance good health care delivery (Mamtora & Pandey, 2018). A progress check in 2019 on the attainment of SDG 3 reveals that more collaborative efforts are required to help in achieving the targets under this goal (United Nations, 2019). This therefore sustains the vital place that health librarians have in their knowledge broker role to contribute to the achievement of SDG 3.

Overview of knowledge brokering for Chitambo Hospital

Chitambo District Hospital being a rural health centre is classified as a low resource setting. The hospital’s state of affairs prompted the Friends of Chitambo (FoCH), a Scottish funded charity organisation, to identify areas for improvements in emergency care communications in order to promote an effective response to emergencies at Chitambo District Hospital and its surrounding health centres. In 2015, FoCH and its partners; the Scottish Government eHealth (Digital Health and Care) Team, the University of Zambia (UNZA) Medical Library, Chitambo District Hospital, the Information Training and Outreach Centre for Africa (ITOCA) and the Zambia Research and Development Technology Academy (ZRDTA) launched the Chitambo Emergency Care Communications Project. This was in line with their project goal of promoting the use of research evidence for improved delivery of health care services in Chitambo district.

This project has a knowledge component work strand with visualisations of converting knowledge into action to improve emergency care response by health care workers in Zambia and possibly other parts of Africa. Execution of tasks for this component prompted formation of a team to help promote the use of evidence-based medicine by Chitambo district health care workers. This team was comprised of Scotland’s National Health Service (NHS), National Education for Scotland (NES) Knowledge Services and University of Zambia Medical Librarians, and the assigned knowledge brokers for Chitambo district’s health care setting. The resolved to adopt the knowledge broker role is on account of its potential to offer adaptable knowledge resources to support Chitambo district health care workers in their clinical practice (Wales & Boyle, 2015).

Translating knowledge into action contextualized

The concept of knowledge into action draws support from the principles of evidence-based medicine roots itself; and the provision of information by librarians as a means of accessing knowledge thereby closing the gap between knowledge and practice (Wales & Boyle, 2015). Sackett, Rosenberg, Gray, Haynes, & Richardson (1996, 71) define evidence-based medicine as; “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means
integrating individual clinical expertise with the best available external clinical evidence from systematic research”. It is the dedicated implementation of up to date evidence by health care workers in decision making of routes for health care for patients (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996).

Inadequate uptake of health research findings into health care practice combined with ongoing insistence of evidence-based practice in health care, have prompted initiation of resourceful ways of reducing the gap between knowledge and practice (Curtis, Fry, Shaban, & Considine, 2017; Kristensen, Nyman, & Konradsen, 2016) i.e. translating knowledge into action. Preference for the word action to denote practice of health care workers is due to it’s all inclusive nature as it integrates knowledge utilisation by professionals, policy makers, patients and communities in the health sector (Graham et al., 2006). Straus, Tetroe and Graham (2011) credit the knowledge to action cycle in a conceptual framework formulated by Graham et al. (2006) as the agreed prototype advancing the knowledge translation procedure in health care settings. Consequently, it formed part of the evidence base in the formulation of the integrated knowledge into action (K2A) cycle (Fig 1) which was prototypically developed for use by the NES Knowledge Services team of Scotland to support their national Knowledge into Action Strategy meant for improvements in quality of health care delivery in Scotland’s health care system (Wales & Boyle, 2015). The model has “a vision of a coordinated network of knowledge brokers (people with a role to support knowledge use), integrated with clinical and improvement teams, which aims to help to improve clinical practice and better health outcomes” (Morton, Wilson, Inglis, Ritchie, & Wales, 2018, p. 2). The model is a typical knowledge translational research model which begins with knowledge gaps that triggers an enquiry, all the way to sharing of knowledge and evaluating that knowledge into use or action to be up taken by the relevant sectors of society. K2A has three phases research, translation and institutionalisation (Wilson, Brady, & Lesesne, 2011). The Knowledge into action model depicts a series of activities and support which help convert knowledge into decisions and actions for health personnel in a clinical settings so that they can provide safe and more effective care (Field, Booth, Ilott, & Gerrish, 2014). The framework encompasses different types of knowledge, and different tools and techniques that help to get knowledge into practice. It directs knowledge managers and health care staff to select K2A tools and ways that best suit their purpose and context (Davies et al., 2017).

Fig. 1. (Davies et al., 2017, p. 76) Knowledge into Action Model
The anticipated delivery of efficient health care in Chitambo district, rationalises the adoption of this K2A cycle for embedding knowledge into the practice for Chitambo health care workers (Ndalameta-Theo & Wamunyima-Kakoma, 2017). And adoption of the cycle is with cognisance of the contextual conditions of Chitambo district’s health care settings, upholding the views of (Conklin, Stolee, Harris, & Lusk, 2013) which stipulate the knowledge transfer process as being contextual.

**K2A supporting the knowledge broker activity for the Chitambo health care system**

Application of the K2A cycle in health care systems optimises the support rendered to health care workers for translating health care knowledge into action. The knowledge brokers thus use the elements of the K2A cycle to carry out knowledge translation initiatives for Chitambo health care workers by procedurally following its replicated sequence of actions. The composition of the K2A cycle regards knowledge as being part of a process model rather than an outcome, which facilitates its embedding in the healthcare workers work routines to enable translation of knowledge into frontline practice (Wales, Bruch, Foster, Gorman, Peters, & Murphy 2014). In this regard, University of Zambia Librarians have played the role of the knowledge brokers by collaborating with Chitambo hospital clinicians in ensuring knowledge is put into action. Health workers and librarians have since been trained to translate knowledge into action. The partnership has necessitated identification of knowledge gaps, while actionable knowledge products were delivered and already being used at point of care and WhatsApp groups formed for knowledge sharing. These elements aid the knowledge brokers in providing specific health information for the specific needs of the health care categories of the 170 health care workers of Chitambo district. In addition, Chitambo health care workers utilising the knowledge broker support gain through having conclusive actions for improved health care delivery.

The functionality of the K2A cycle is backed by theoretical concepts and methods that as stated by Wales, Bruch, Foster, Gorman, Peters & Murphy (2014) amplify the knowledge brokers capacity to align health care workers service delivery to rely on a combination of research knowledge; and knowledge gained from experiences in full cognisance of their contextual systems and procedures. These theoretical concepts and methods are ingrained in its phases; Enquiry, Implementation and Outcome (Field et al., 2014). Each phase demands performance of specific and dedicated roles by the knowledge brokers to ensure the overarching goal of translating knowledge into action for the health care workers of Chitambo district hospital. The knowledge broker activity for Chitambo health care workers has since its inception followed the different stages of the cycle. The activities are recurring owing to the cyclic nature of the phases prescribed by the cycle’s model (NHS Education for Scotland, 2015). The translation of knowledge into action for the Chitambo health care workers required that the knowledge brokers acquainted themselves with the Chitambo health system’s context in order for them to identify interventions that could result in tailor made implementation of knowledge interventions to support decision making at point of care. In this respect, Graham et al., (2006) recommends full comprehension of the needs of decision makers coupled with the environmental factors that may affect their decision making prior to the implementation of any knowledge translation strategies. It is the duty of the knowledge brokers to identify any existing knowledge gaps through constant consultation with the health care workers of Chitambo hospital and the surrounding rural health centres. These consultations may result in the identification of some critical information resources required for the Chitambo health care workers. However, what is important is determining the right kind of information needed by health care workers to meet their knowledge needs. These individual information needs are diverse and may require an array of health care information resources. This can be overwhelming for the user, hence the need for expert help from health librarians.
to identify the most relevant resources that are high of quality and easy to use (Brennan et al., 2014; Kanyengo & Hoppenbrouwer, 2007b).

Intricacies of health researchers and decision maker’s inability to translate knowledge from research evidence and implement its use in health practice brought forth the knowledge broker role which carries a specific aim of facilitating transfer of research evidence from researchers to the health care practitioner in practice (Ward, House, & Hamer, 2009a). Although very few studies attribute knowledge brokering to librarians, Wales and Boyle (2015) point out that the capabilities of a knowledge broker are similar to those held by librarians. The similarities in capabilities between the roles of a knowledge broker and a librarian are due to the nature and type of training that librarians undergo as well as the job descriptions they end up occupying. Supportively, the scenario above demonstrate some of the knowledge broker roles that could be taken up by health librarians (Booth, 2011), which even with its limitations, can be used as a novel depiction from which one, can cite as allowing for maximum use of health librarians in the African library and information science arena. The evolving role of the health librarian from the traditional librarian roles has been necessitated by their current multifaceted work environment that has arisen out of the growing need for different kinds of information resources sought by health care workers to meet their education, research and practice needs (Booth, 2011; Ma, Stahl, & Knotts, 2018; Ullah & Anwar, 2013). Comparably, the Chitambo district health care setting stands to benefit from the services of health librarians who can perform a critical role in its system by facilitating the delivery of effective health care service delivery through the provision of relevant information resources to health care workers (Perrier et al., 2014).

Conclusion

There is a case to be made for health librarians to play the role of knowledge broker in a health care setting. The skills that are imbued in librarians are the skills that are required in assisting health care workers make informed decisions regarding health care delivery based on evidence based information. These synergies may ensure the achievement of SDG 3 that calls for the adoption of cross cutting approaches to address the inherent challenges facing African health care settings. The African knowledge broker network has the potential to promote interventions for improvements in health care in African populations thereby contributing towards the attainment of Sustainable Development Goal (SDG 3) (United Nations, 2015) of ensuring healthy lives and promoting wellbeing for all at all ages. Therefore, the Knowledge to Action Model of NHS Education for Scotland can potentially assist to overcome the lack of proper information for Health Care workers not only in Zambia but the developing world.
References


