BIREME's MedCarib Database: Surviving the Challenges Experienced in Trinidad and Tobago

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Abstract

MedCarib is a quasi-open access database comprising health information publications from the English-speaking Caribbean and Suriname. This database functions under the umbrella of a network of Caribbean health sciences libraries that contributes records to the larger Latin American & Caribbean Health Sciences Literature (LILACS) database. The Medical Sciences Library, The University of the West Indies, St. Augustine, Trinidad and Tobago is the coordinating centre for MedCarib (Center TT5).

Over the years, the MedCarib collaboration faced many challenges and these were outlined at a workshop consisting of past and present MedCarib participants, held June 2017 in Trinidad and Tobago. The workshop was entitled *MEDCARIB - Reviewing Progress and Charting a Way Forward Medical/Health Literature in the English-speaking Caribbean.* Challenges expressed included the continual loss of personnel trained in implementing the MedCarib Methodology, coordination of the project and allocation of resources. Despite this, the Medical Sciences Library was able to ensure continuous contribution to the MedCarib database by implementing two main strategies. These were integrating the MedCarib database into the Indexing Unit at Center TT5 and training of personnel to use the MedCarib Methodology. Implementing these strategies led to a steady flow of contributions during the period of dormancy (2003–2017) which totalled 1923 entries. This paper outlines the challenges, which were experienced in Trinidad and Tobago, examines the strategies employed to overcome these setbacks and shows how they worked to facilitate continuous contributions to the MedCarib database.

Keywords: BIREME; database; English-speaking Caribbean; health literature; MedCarib; medical literature; Medical Sciences Library, The University of the West Indies, St. Augustine Campus, Trinidad and Tobago; open access; Suriname.

Introduction

"Access to the latest information is vital for today's health worker, but in places where resources are constrained, getting it can be challenging" (Unlocking Access to Vital

Health Information in Papua New Guinea, 2017). The sentiments expressed in this statement summarize the critical elements which gave birth to MedCarib, allowing developing countries of the English-speaking Caribbean and Suriname, to have equitable access to medical and health information.

According to Greenidge (2013), through the technical cooperation of Latin American and Caribbean Center on Health Sciences Information (formerly, Biblioteca Regional de Medicina - BIREME), the MedCarib database was developed to collect, index and compile health-related literature from each participating country. The Medical Sciences Library (MSL) of The University of the West Indies (UWI), St. Augustine which was the Regional Coordinating Centre up to 2020 facilitated the operations.

The paper examined the challenges Trinidad and Tobago experienced as a participating member of BIREME's MedCarib database. Based on the evidence in the literature, the MedCarib database does not fully qualify as an open access resource largely because the database generally contains bibliographic data pointing users to medical and health information emanating from the English-speaking Caribbean and Suriname. However, it can be viewed as a hybrid open access resource as it attempts to make relevant health literature discoverable and equitably accessible.

Background

Marcia Barretto, Coordinator of Information Technologies Infrastructure of the Administration Management (ITI/GA) representing BIREME, provides background information on this network. Barretto outlined that the MedCarib Methodology started in 1989 under the purview of Laxmi Mansingh from the UWI Mona campus, Jamaica. In the following year, the MedCarib project received funding from the Kellog Foundation which helped to establish the participation and use of the MedCarib Methodology throughout the English-speaking Caribbean and Suriname. She further highlighted that MedCarib's objective, "was created to make medical and health information free, discoverable and accessible" (M. Barretto, personal communication, January 15, 2019). Table 1 shows a graphic depiction of the initial participants and contributing countries that made up the MedCarib network in 1990.

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Table 1

A List of the Initial MedCarib Countries which Started in 1990

MedCarib Network in 1990		
Anguilla	Cayman Islands	St. Kitts & Nevis
Antigua	Dominica	St. Lucia
Bahamas	Grenada	St. Vincent
Barbados	Guyana	Suriname
Belize	Jamaica	Trinidad and Tobago
The British Virgin Islands	Montserrat	

Note. BIREME/PAHO/WHO MedCarib Member States 1990

This paper discusses the challenges experienced in the Trinidad and Tobago MedCarib contributing centre and the strategies employed to ensure continuous submission of records to the database. The methodology for this paper relied on primary and secondary sources. A one-on-one interview with two structured questions was used to give the historical context for MedCarib. A literature review examined related research to provide context. Grey literature which included statistics, reports, minutes from meetings and PowerPoint presentations provided evidence-based information.

Literature Review

A literature review outlines the importance of the MedCarib database as a quasi-open access resource, which makes medical and health information from the English–speaking Caribbean and Suriname universally accessible and discoverable. It also highlights that even with the best of intentions, challenges will occur.

Open Access

Open access (OA) according to the Budapest Open Access Initiative of 2002, is a "response to the growing demand to make research free and available to anyone with a computer and an

internet connection" (Budapest Open Access Initiative, n.d.). Harnard's (as cited in Jain, 2012) description of open access, refers to "information, which is free, immediate, permanent, full-text, online and accessible" (p. 1). Based on these ideas, OA seeks to use the power of technology to make research freely available and accessible without restrictions. Insufficient funding experienced among developing countries made it difficult for libraries to deliver up-to-date, research-based information to its users. In the medical and health profession, it is particularly important to deliver up-to-date information. Kreps (2005) makes the connection between access to evidence–based information and the achievement of quality health care by stating "health information is essential in health care and health promotion, because it provides direction and rationale for guiding strategic health behaviours, treatments and decisions" (p. S68). Therefore, the OA movement strives to bring equal access to medical and health information for all regardless of a country's economic status.

The MedCarib database in its original state sought to provide free bibliographic access to scientific health information. However, it falls short of being referred to as an open access database because it does not provide access to full-text articles. It serves to make health-related information coming from the Caribbean region discoverable to its medical and health professionals and as such, can be considered a quasi-open access resource.

Equitable Access to Medical and Health Information

Equitable access to medical and health information was stressed as an important facet in the provision of healthcare and related services in the Singapore Declaration of 2009. According to this Declaration, "quality scientific and technical health information is essential for health policy makers, healthcare providers and health researchers to develop, improve, and implement efficient and effective healthcare systems and services" (Singapore Declaration, 2009). Unfortunately, equal access to medical and health information is challenging, particularly among developing countries. This inequity can have negative implications for the delivery of quality health care. Kreps (2005) was of the view that, "the digital divide has been identified as a special problem in health care that can lead to significant disparities in care" (p. S68). This was further reinforced by Abdala and Taruhn (2007) who disclose that there continues to be "inequities in accessing

information and knowledge, mainly in developing countries, despite the proliferation of electronic resources" (p. 42).

The MedCarib database seeks to address this inequitable access to information by making Caribbean bio-medical literature electronically accessible. Since it is an OA repository containing scientific, medical and health information, researchers, medical and health professionals have access to a free resource that will aid in pointing users to evidence-based information. Saleh, Ratajeski and Bertolet (2014) purport that providing equitable access to medical and health information for all, allows everyone to be on an equal footing. The overall benefit according to Wani and Shafi (2015) of using an OA repository is its ability to give access without restriction to its contents, "at any time which in turn can lead to increased readership…" (p. 51), and give the tools needed for medical and health practitioners to make evidenced-based health decisions.

Making Medical and Health Information Discoverable

The selection criteria for documents entered into the MedCarib database follows the guidelines outlined by the LILACS Methodology for its Virtual Health Libraries (VHL) which is a concept conceived by the Latin American and Caribbean Center on Health Sciences Information (BIREME). Gosine-Boodoo, Siew and Alleyne-Cumberbatch (2013) in their evaluation of the Trinidad and Tobago Virtual Health Library website, outlined that the purpose for this VHL initiative was to bring together a diverse range of health information sources emanating from Latin-America and the Caribbean region. The database's coverage, according to the fifth edition of the LILACS Methodology Document Selection Guidelines for LILACS database (revised and expanded) outlines that the database includes conventional and non-conventional documents about health literature in print or electronic form produced by Latin American and the Caribbean authors (BIREME / PAHO / WHO [Brazil], 2008). Participating countries are encouraged to contribute published or unpublished data into the database covering a broad spectrum of evidence-based information for a cross-section of medical and health professionals.

Information such as unpublished documents or "grey literature", is one type of information that is largely difficult to access, yet, is invaluable to research. The importance of grey literature was observed in a study which examined the way systematic reviews were conducted. In one study grey literature help "…overcome some of the problems of publication bias, which can arise due to

the selective availability of data" (Hopewell, McDonald, Clarke, & Egger, 2007, p. 2). Osayande and Ukpebor (2012) in their study embraced the definition of grey literature from the Information World Review as, "the unsung hero, the foot soldier, the foundation of the building" (p. 1). Failure to include grey literature according to McAuley, Tugwell and Moher (2000) could lead to exaggeration. Based on the foregoing, the importance of unpublished documents in research has its merits. It makes unpublished literature available and complements existing research. It is noteworthy that the MedCarib database plays a part in making medical and health information discoverable, available and accessible to the researcher by providing every possible type of information that would lead to more thorough research.

Collaboration in Providing Biomedical and Health Information

Historically, medical librarians from developing countries had to find ways to provide quick access to biomedical and health information to their clientele in spite of budgetary cuts. Collaboration was one of the avenues explored to treat with this issue. Lewis and Drayton-Andrews (2004) note that this challenge was discussed and the solution presented then, remains the same. Members of the English-speaking Caribbean and Suriname agree with sentiments expressed by Lasker, Weiss, Miller and Community-Campus Partnerships for Health (2001) that, "in today's environment most objectives related to health and health care cannot be achieved by any single person or organization working alone" (p. 164). Lewis and Drayton-Andrews (2004) cited that "cooperation and resource sharing among the 17 participating countries have been the hallmarks of this database". The collaboration of these countries led to the development of MedCarib.

In discussing collaboration to improve health, Lasker et al. (2001) admitted that, "despite the potential benefits of collaboration, it is important to recognize that collaboration is often time-consuming, resource–intensive and frustrating" (p. 164). Like other collaborative efforts, the administration of the MedCarib database faced many challenges. These include, but are not limited to human resources shortages, inactivity, lack of resources and database promotion. However, once these challenges are addressed, MedCarib has the potential to become a powerful resource to help give efficient access to reliable evidenced-based biomedical and health information.

Challenges

Implementing projects, especially those in their embryonic stages, usually has many challenges, and the MedCarib initiative was subject to some of them. This was revealed in a workshop held in June 2017, entitled "*MEDCARIB - Reviewing Progress and Charting a Way Forward Medical/Health Literature in the English-speaking Caribbean*". Participants at the workshop outlined many challenges that stymied their involvement with MedCarib.

Loss of Personnel

Training and sensitizing personnel in the use of MedCarib are necessary to maintain and make contributions to the database. The workshop participants from all contributing member libraries, collectively highlighted an exodus of personnel initially trained with the skillset and knowledge about MedCarib, during the period, 2003–2017. Massingham (2008) argues that when employees leave institutional knowledge is lost which may directly impact an organization's output. The effect from this loss of personnel in the use of MedCarib resulted in the reduction of output and in some cases, no productivity. Durst and Ferenhof (2014) also state that individuals who leave an organization, take their institutional memory with them. If steps are not implemented to harness this knowledge, the departure can have a negative impact on the organization. Workshop participants also pointed out that some staff members who were trained, simply forgot what they were taught because they did not get an opportunity to apply the knowledge acquired. This is evident in the lack of contributions made to the MedCarib database.

Coordinating Inactivity

This loss of personnel also affected the coordinating efforts of the MedCarib initiative. The role of the MedCarib Regional Coordinator is to coordinate the efforts of each participating member in indexing, communicating with member states, sensitizing respective governments and Ministries of Health about MedCarib, getting governmental support and identifying the ICT needs of each country (Greenidge, 2013).

When the project received funding from the Kellog Foundation in 1990, Laxmi Mansingh was appointed the Regional Coordinator. Following Mansingh's retirement, this coordinating role

was not assigned to another person. This led to a lack of communication among member states, and adversely affected the number of contributions to the database.

Lack of Resources

Financial resources played an integral part in the success of the MedCarib initiative, particularly in its early stages. At the end of the Kellog funding, Lewis and Drayton-Andrews (2004) point out that while "…some institutions were able to continue the work of the project…many coordinating libraries were not always capable of providing such [financial] support" (p. 64). Subsequently, there was a decline in countries' ability to make entries into the database.

One of the issues affected by the lack of financial resources was the ability to afford the ICT equipment to support the work of the project. Lewis and Drayton-Andrews (2004) point out that as far as ICTs were concerned, the "institutional infrastructure was deficient," (p. 64) for MedCarib member countries. Necessities such as access to a reliable Internet Service Provider (ISP), computers and other ICT peripherals, unless they were donated and maintained, were unavailable to many MedCarib participants and this made it difficult to make any contributions to the database.

Promoting the Resource

While entries into the MedCarib database make information discoverable and accessible, the benefit of this repository can only be realized if users are aware of the existence of this OA resource. Marketing the content and encouraging the use of the MedCarib database are therefore critical. Adefulu (2015) states promotion is one of the major tools that should be used to attract consumers towards a product because it assures awareness of what is being offered. Advertising encompasses a promotional mix of activities which seek to inform, remind and persuade its target market about a product or service.

To fulfil MedCarib's objective to give access to medical and health information, promoting the resource is just as critical as making contributions to the database. Continuous promotion of MedCarib, must be followed by constant sensitization among relevant stakeholders. Focusing on promotion, Lewis and Drayton-Andrews (2004) wrote that librarians from the MSL were

generally called upon to provide leadership roles in the promotion and delivery of medical information services to their constituents (p. 21). On reporting about users' familiarity with the MedCarib database, the authors stated that "many participants were not familiar with the regional MedCarib database, and those individuals who were aware of MedCarib vaguely remembered it from the past" (p. 25). The researchers summarized that there was ample evidence for a greater need to promote the MedCarib database. Writing on the promotion of electronic information Das (2013) stated, "showing users how they will benefit from the resources - or what's in it for them – adds significant mileage to electronic resource promotion…as users understand the payback they will receive from a resource, they are more likely to remember it and use it" (p. 38).

Challenges and Dormancy

Figure 1

MedCarib: Country and Years of Contribution

	MedCarib: Country and Year of contribution											
Year	Anguilla	Bahamas	Barbados	Cayman Islands	Dominica	Grenada	Jamaica	Saint Lucia	Saint Vincent and Grenadines	Suriname	Trinidad and Tobago	**Total**
1990		7					276				1	**284**
1991			15			9	2958		6		31	**3019**
1992		3	24			20	1670		8			**1725**
1993						14	1796				1092	**2902**
1994	1		13			1	1547				223	**1785**
1995	21	15	1	17	39	13	1799				1	**1906**
1996		49	101	2		19	688	29		122	185	**1195**
1997							521			20		**541**
1998							312			2	10	**324**
1999							340			32	1	**373**
2000							827					**827**
2001							191					**191**
2002							316					**316**
2003											262	**262**
2004											528	**528**
2005											113	**113**
2006											83	**83**
2007											143	**143**
2008											127	**127**
2009											121	**121**
2010											14	**14**
2011											202	**202**
2012											54	**54**
2013											35	**35**
2014												**0**
2015											187	**187**
2016											24	**24**
2017											30	**30**
TOTAL	**22**	**74**	**154**	**19**	**39**	**76**	**13241**	**29**	**14**	**176**	**3467**	**17311**

Note: Total contributions from 1990-2017

Table 2

Contributions Made by MedCarib Countries

MedCarib Contributing States	Contributions	Percentage

1	Anguilla	22	0.12%
2	Bahamas	74	0.42%
3	Barbados	154	0.88%
4	Cayman Islands	19	0.10%
5	Dominica	39	0.22%
6	Grenada	76	0.43%
7	Jamaica	13241	76%
8	St. Lucia	29	0.16%
9	St. Vincent and the Grenadines	14	0.08%
10	Suriname	176	1.01%
11	Trinidad and Tobago	3467	20%

Note. A numerical breakdown of the contributions made by the participating countries

During the period 2003–2017, the challenges outlined negatively affected the way contributions were made into the database. Figure 1 and Table 2 show the contributions made by 11 of the 17 MedCarib countries. Statistics provided by BIREME show that between 1990 and 2017, a total of 17,311 contributions were made to the database. Of this, Trinidad and Tobago made a total of 3467 (20%) contributions. During the years of active participation (1990 – 2003), there was a steady flow of contributions from these members, the table shows Trinidad and Tobago making 1544 (9%) contributions. During the years of dormancy (2003–2017), Trinidad and Tobago was the lone contributor making 1923 (100%) contributions to the database.

The data also illustrate the dwindling contributions made by the MedCarib member states. The lack of contributions resulted from the challenges participating countries experienced over the years and made it difficult to fully support the work of the MedCarib project. However, the efforts of Trinidad and Tobago made it possible to continue supporting the MedCarib initiative.

Strategy

Despite these challenges, there was a need to develop a strategy to find ways to continue making contributions to the MedCarib database. In Trinidad and Tobago, the MSL integrated the MedCarib database into the workflow of the Technical Services Unit. This became the strategy to index medical and health literature related to the English-speaking Caribbean and Suriname. By harnessing the expertise and resources available in the Cataloguing Department,

the MedCarib contributions were sustained during the 2003-2017. Cataloguing and indexing functions supported the MedCarib initiative by making medical and health information of the Caribbean discoverable. Once deployed this strategy stimulated continuous contributions to the MedCarib database from Trinidad and Tobago.

Staff at MSL received the necessary training to fulfil the indexing responsibilities. They were also sensitized about the importance of MedCarib and the significance of the process in making Caribbean medical and health information discoverable and available.

Outcome for Trinidad and Tobago

Statistics provided by Marcia Barreto during our interview showed that between 1990 and 2017, Trinidad and Tobago provided a total of 3549 entries to the database. However, between 2003-2015, Trinidad and Tobago was the lone contributor, contributing 1869 entries (M. Barretto, personal communication, January 15, 2019). These entries reflect data harvested at the MSL plus contributions made by the Caribbean Public Health Agency (CARPHA).

Recommendations

Although Trinidad and Tobago's efforts to support the MedCarib database is to be lauded, measures should be considered which could lead to an increased number of entries to the database, as well as encouraging greater participation from member countries. Based on the Trinidad and Tobago experience, the following recommendations should be considered in moving forward with the MedCarib project at the country level.

Training and Sensitization

Continuous training and sensitizing staff of participating libraries in the MedCarib methodology are required. This skill set is crucial because the MedCarib methodology is a standardized format by which entries are made into the database.

Marketing and Promotion

Marketing is vital to the longevity of the MedCarib database. Promoting this quasi-open access database can encourage health and medical practitioners and researchers to find

information to support health issues. It would also help to give access to Caribbean-related information that would support evidence-based decisions.

Support at the Administrative Level from Policy Makers

Since the MedCarib initiative seeks to harvest health information from participating countries, it is important that relevant agencies at the country level provide support to the MedCarib initiative. An interview with Victoria Cruickshank-Taylor, CARPHA Communications Officer with more than 20 years' experience working with the MedCarib project, outlines that, "once there is support and buy-in at the level of health policy makers their active participation would lead to the development and implementation of systems such as policies and financial support" (V. Cruickshank-Taylor, personal communication, February 18, 2019).

Stimulate Participation from the MedCarib Network

Stimulating interest and even identifying new centres in Trinidad and Tobago to participate in the MedCarib project will lead to an increase in contributions at the country level and to the MedCarib database. Lack of contributions from participating centres at the country level reflected negatively on the number of contributions made to the database. At the country level, centres are established and given the responsibility to gather data that would qualify for addition into the repository. Over time, there was a dormancy of contributions from the participating centres in Trinidad which led to the emergence of the MSL as the sole contributor to the database.

Contributions from Tobago

Since the inception of the MedCarib project, the database does not contain contributions from Tobago. To give a comprehensive representation of medical and health information from Trinidad and Tobago, a contributing centre must be established in Tobago. This would aid in obtaining contributions from the island and expanding the type of content coming out of Trinidad and Tobago.

Conclusion

The challenges identified among MedCarib territories included the absence of a regional co-ordinator, an exodus of trained personnel, lack of resources and insufficient promotion of the resource. However, in spite of this, data entry statistics provided by BIREME demonstrated that Trinidad and Tobago was able to make steady contributions during this challenging period. This is in part was due to the implementation of sustainable measures at the MSL. The application of these strategies resulted in Trinidad and Tobago making continuous contributions to the database. It is recommended that other MedCarib participating countries view the implemented strategies from Trinidad and Tobago as a model to help boost the support of the database through its contributions.

Overall, the growth and development of the MedCarib database rely on collaboration and participation among its members to be truly reflective of a collection of medical and health information from the English-speaking Caribbean and Suriname. The vision to provide equitable access to health literature via the MedCarib database requires more regional participation. At the time of this publication, only six of the seventeen countries which started as participants are active in the network.

The MedCarib database has the potential to be a repository of medical and health research from the English-speaking Caribbean and Suriname. This potential can only be fully realized if there is greater collaboration, more contributions and promotion of the database. Once these areas are addressed BIREME's MedCarib database will be poised to be reflective of health data from the region.

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