Information-seeking behaviour and information needs of LGBTQ health professionals: a follow-up study

(Corresponding author)
Martin Morris, MSc
Schulich Library of Science and Engineering, McGill University,
809 rue Sherbrooke ouest, Montréal, H3A 0C1, Canada
(514) 398 8140 / martin.morris@mcgill.ca

K.R. Roberto, MLIS
Graduate School of Library and Information Science,
501 E. Daniel St, Champaign, IL 61820, United States

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No competing financial interests exist.

ABSTRACT

Background

Except for one study in 2004, the literature has no data on the information-seeking behaviour of LGBTQ health professionals. After a decade of change for LGBTQ people, and the growth of electronic information sources and social networks, it is appropriate to revisit this subject.

Objectives

To gain an updated understanding of the information-seeking behaviour of LGBTQ health professionals and how medical libraries can provide a culturally competent service to such users.

Methods

A mixed-methods approach was adopted combining a web-based questionnaire with email follow-up discussions. 123 complete responses were received, mostly from the US and Canada, between November 2012 and October 2013.

Results

LGBTQ health professionals remain more comfortable seeking LGBTQ health information from a medical librarian whom they know to be LGBTQ because they perceive LGBTQ librarians as more likely to have specialist knowledge, or through concern that non-LGBTQ librarians may be more likely to react in a stigmatising or discriminatory way. The study also provides evidence suggesting that online chat has marginal appeal for respondents seeking LGBTQ health information, despite its anonymity. Medical libraries seeking to demonstrate their cultural competency should provide visible evidence of this, such as through the creation of dedicated resource lists, promotion of LGBTQ literature on the library's website, and display of other symbols or statements supporting diversity.

Conclusion

Opportunities exist for LGBTQ health professionals and medical librarians to work together to ensure that medical libraries are culturally competent and welcoming spaces for LGBTQ patrons, that library collections match their needs, and in the creation of guides to ensure maximum access to the results of LGBTQ health research. Medical libraries should also consider nominating and, if necessary, training a specialist in LGBTQ health information. Such measures are more likely to be successful than reliance on online chat, despite contrary suggestions in the literature.

Key Messages

- LGBTQ health professionals prefer working with medical librarians they know to be LGBTQ, because of concerns about discrimination or a lack of relevant knowledge.
- Users value confirmation that the library welcomes LGBTQ patrons through the use of visible signs and dedicated subject guides.
- Medical libraries should consider appointing and, if necessary, training a specialist in LGBTQ health information.
- There is limited training available for medical librarians interested in LGBTQ health. A collaboration between interested medical faculty and specialists in developing materials should be pursued.

Background

In 2004, Fikar and Keith conducted a seminal study into the information needs and information-seeking behaviour of lesbian, gay, bisexual, transgender and queer/questioning (LGBTQ) health professionals.[1] Their study found that, due to concerns that they may experience discrimination, many LGBTQ health professionals prefer to seek LGBTQ health information from a medical librarian who is also LGBTQ; results also indicated that they have distinct information needs, and that they would like medical libraries to create a more LGBTQ-friendly environment through the use of visible signs of support and targeted web resources such as dedicated subject guides on LGBTQ health.

LGBTQ healthcare professionals, like their counterparts in the general population, are living through a time of change.[2,3] Positive shifts in public attitudes[4-6] have resulted in increased civil liberties for many LGBTQ people, such as anti-discrimination legislation and marriage equality, and have allowed members of this group to be increasingly open about their sexuality or gender identity.[7,8] This increased openness appears to be resulting in greater attention towards LGBTQ health in the literature; a PubMed search for articles on LGBTQ health yields 2685 relevant studies published in 2014 (0.243% of all PubMed articles for that year), over double the number published in 2004 (1094, 0.177%).

Over the last decade numerous studies have addressed the use of general library services by LGBTQ library patrons[9,10] and the information needs and information-seeking behaviour of LGBTQ healthcare consumers;[11,12] this research has greatly increased our understanding of how LGBTQ people engage with libraries and of the difficulties and barriers they may experience when doing so. Schaller additionally explores the use of academic libraries by LGBTQ students,[13] and recognises that these users can experience "library anxiety" linked to fear of identity disclosure, along with a perception that much of the information available will centre on the needs of the heterosexual majority.

Despite this growing body of literature, no similar studies within the context of health librarianship have been published since 2004. A history of stigma unites many LGBTQ people;[14] this lack of research suggests that health librarianship has been slower than other sectors of the profession, both in fully recognising this and in formulating responses through research.

Additionally, the profession could improve access to relevant information for LGBTQ health professionals. For example, the Medical Subject Headings (MeSH) system offers a limited number of LGBTQ health terms. The terms *Transvestism* (introduced in 1962), *Homosexuality* (1966), *Transsexualism* (1968), *Bisexuality* (1988) and *Homosexuality, Male* and *Homosexuality, Female* (1995) existed at the time of Fikar and Keith's study. The only subsequent additions are *Sex Reassignment Procedures* and *Sex Reassignment Surgery* (both introduced in 2011), and *Transgendered Persons* and *Health Services for Transgendered Persons*, (both introduced in 2013). Moreover, in our view it is regrettable that the MeSH headings *Transvestism* and *Transsexualism* define these phenomena as psychological sexual dysfunctions rather than as distinct gender identities.

As societal attitudes change towards LGBTQ people, corresponding changes in how LGBTQ people see themselves are also emerging.[15] For some (particularly younger people) the new social context encourages a confident "post-gay" rejection of any labelling of sexual orientation or gender identity,[16] while for others their LGBTQ identities remain relevant,[17] even as they question those labels.[18]

Nonetheless, LGBTQ health professionals may still be harassed by colleagues,[19] feel pressure to remain closeted,[20] or face a broader medical community which rarely defends its LGBTQ members.[21] Furthermore, a recent study[22] demonstrates that this discrimination often starts as early as medical school.

LGBTQ people also continue to have distinct[23,24] and varied[25] health concerns, particularly in the case of transgender and gender non-conforming people.[26] These needs are changing over time due to societal and scientific advances, for example for the increasing number of older LGBTQ people[27].

For health librarians to provide the best possible service to these users, they need an up-to-date understanding of the distinctive circumstances, such as a history of discrimination and prejudice, which may drive these users' information-seeking behaviour, their information needs, and their interaction with medical librarians.

Objectives

The purpose of this study is to provide an updated understanding of the factors that drive how LGBTQ health professionals seek health information and interact with medical librarians, and how technological changes may have altered this behaviour.

The study further aims to outline the specific information needs of LGBTQ health professionals and their LGBTQ patients, and how these needs have changed over the last decade. It is our hope that this updated information will help medical librarians working to ensure that their service is culturally competent and welcoming to their LGBTQ patrons.

Methods

A preparatory literature review was conducted to identify new literature published since the original study. The *LISS* (EBSCO), *LISA* (ProQuest), *PubMed*, *Medline* (Ovid), *Embase* (Ovid), *CINAHL* (EBSCO) and Scopus databases were searched, with no new relevant results.

Our study employed a mixed-methods approach, combining both quantitative and qualitative methods in order to provide greater depth and rigour,[28] and using Fikar and Keith's questionnaire as a starting point. Fikar and Keith solicited responses from both health professionals and medical librarians, both LGBTQ and non-LGBTQ, receiving 53 responses from LGBTQ health professionals. The present study focussed exclusively on LGBTQ health professionals in order to explore this group in greater detail, and to contribute a more nuanced body of evidence. Therefore, only those questions relevant to this group were transferred from the original study.

The questionnaire (see Appendix 1) contains questions soliciting both quantitative data, through the use of Likert scales, and qualitative data, where respondents were invited to provide further information. Where appropriate, questions including a Likert scale were modified by increasing the number of response options to improve data granularity, for example when asking about the likelihood of approaching a medical librarian under various circumstances. New questions in this study cover online chat, perceptions of change over the last ten years, and adequacy of online medical resources.

Using this modified questionnaire, a convenience sample of LGBTQ health professionals was surveyed between November 2012 and October 2013 via a web-based survey platform hosted at McGill University. Respondents were recruited through representative associations in the US, Canada, UK, Eire, Australia and New Zealand, and at an Australian conference for LGBTQ health professionals. A link to the questionnaire was also distributed through various electronic mailing lists and professional bulletins used by medical librarians, with a request that they publicise the survey and pass the link to any interested health professionals. Organisations thus contacted include the Medical Library Association's LGBT section, the American Library Association's GLBT Round Table, and health librarian associations in the US, Canada, the UK and Australia.

Due to a lack of data in the literature, a special effort was made to recruit transgender and gender non-conforming participants through personal contacts and trans-specific email lists. This population has unique health concerns, and the field of transgender health is attracting increasing attention, particularly in the areas of psychology[29] and endocrinology,[30] resulting in greater visibility of transgender health professionals and patients.

Due to the almost complete lack of literature on the information-seeking behaviour of LGBTQ health professionals, the survey responses and follow-up email interviews were studied using grounded theory, a methodology demonstrated to be appropriate for research questions where existing theoretical frameworks are limited or unavailable.[31,32] Grounded theory researchers gather data iteratively, analysing this data between visits to the field and repeatedly returning until nothing new is retrieved. Although commonly

associated with qualitative methods, grounded theory does not exclude the incorporation of quantitative data.[33]

Following this approach, quantitative data were initially analysed using Microsoft Excel. Qualitative data were then analyzed using open coding in order to identify initial themes. Following this initial analysis, consenting individual respondents were selected for follow-up interviews by email in order to gather further qualitative data. Additional themes were then identified through further use of open coding and by comparing and contrasting responses with existing qualitative and quantitative data, and further follow-ups were conducted until no new themes were identified. Finally, the results of this analysis were compared with those provided by the original study.

Results

In total 123 complete survey responses were received; significantly, 13 responses (10.6%) came from transgender respondents. Thirty-eight respondents were contacted for in-depth follow-up email interviews; these questionnaire responses and follow-up email interview data form the basis of our analysis. From this analysis, it can be seen that many findings from this study suggest the continued validity of Fikar and Keith's conclusions.

Tables 1, 2 and 3 show summaries of this cohort, while Tables 4 to 8 and Appendix 2 provide summaries of responses. As in the 2004 study, the majority of respondents came from the United States (88, 71.5%), followed by Canada (25, 20.3%), with limited responses from the UK, Ireland, Australia, and Belgium (10, 8.2%). While respondents come from a wide variety of specialties, it is interesting to note the dominance of mental health specialists in the cohort, a possible reflection of the significant mental health disparities experienced by LGBTQ people.[34]

Table 1: Sexual orientation of respondents (N=123)

	N
Lesbian	40
Gay	41
Bisexual	16
Queer	25
Other	13

Note: The sum of these categories is greater than 123, as some respondents stated that they identify with more than one orientation.

Table 2: Respondents identifying as transgender (N=123)

	N (%)
Transgender	13 (10.6)
Not Transgender	110 (89.4)

Table 3: Respondents by medical specialty (N=123)

	N
Mental Health	36
Unknown	9
Family Practice	6
Social Work	6
Nursing	5
Primary Care	5
Academic Medicine	4
Physical Therapy	4
Public Health	4
HIV	3
Internal Medicine	3
Obs/Gyn	3
Oncology	3
Sexual Health	3
Administration	2
Epidemiology	2
General Practice	2
Medical Librarianship	2
Pharmacy	2

Acupuncture	1
Adolescent Medicine	1
Anaesthesiology	1
Dentistry	1
Dermatology	1
Emergency Medicine	1
Genetics	1
Geriatrics	1
Haematology	1
Massage Therapy	1
Naturopathic Care	1
Neurology	1
Pathology	1
Plastic Surgery	1
Quality Assurance	1
Radiology	1
Speech/Language Therapy	1
Student	1
Transgender Medicine	1

Experiences of LGBTQ health professionals with medical librarians

Thirty-three respondents addressed these questions. Twenty-seven (81.8%) reported a positive experience of working with a medical librarian, three (9.1%) reported a negative experience, and a further three reported both positive and negative experiences. While some respondents reported reference encounters where the librarian was unfamiliar with LGBTQ health literature, no respondents reported specific examples of discrimination by the librarian. Both of these observations were also noted in the original study.

These results are to a certain extent reassuring, although almost none of those reporting a positive experience set a context by providing further qualitative feedback. One respondent gave positive third-party feedback:

> *"I have not needed to do this* [consult a medical librarian] *since I started in my current clinic* [sic] *area. I do know health professionals in other fields who have had positive experiences with our medical librarians with this reference question, so clicked 'yes' for positive experience. Our affiliated university/library is very LGBTQ-friendly."*

While one other respondent explained that their positive experience could be explained as follows:

> *"However, my two medical librarians of choice are both queer identified"*

Others reporting a positive experience comment that it can be challenging to find a medical librarian fully aware of the special nature of LGBTQ health inquiries. These respondents made it clear that their information needs were subsequently going unmet, with some choosing to either work with librarians with non-medical specialisations or to no longer consult librarians at all. *"I've had interactions where it was clear that the librarian had no concept or awareness of LGBT issues so I searched on my own or sought out the help of another librarian, often one with a social science (social work) responsibility."*

This complements a respondent reporting a negative experience:

> *"I was looking for information on relationship therapy for the LGBTQI population and wasn't able to find much and the librarian was only able to point me to books used for educating mental health professionals, no current research."*

Likelihood of using a medical librarian

Respondents were asked to grade how likely they are to approach a medical librarian when seeking general health information, when seeking LGBTQ health information, and when seeking such information from a known LGBTQ librarian. Respondents also gauged whether they believe it is easier to approach a medical librarian now than in 2004.

The results, summarised in Tables 4 and 5, strongly suggest the continued validity of Fikar and Keith's conclusions. As in the original study, responding LGBTQ health professionals remain considerably more likely to seek LGBTQ health information from a known LGBTQ medical librarian. This is apparent both where the health professional is seeking information for patient care, and relating to their own health or research.

Table 4: Likelihood of approaching a medical librarian under various circumstances (N=123)

"When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, how likely is it that you would approach a medical librarian…"

	Very likely	Quite likely	Quite unlikely	Very unlikely	I don't know/ No Answer
	N (%)				
…if you were seeking information for the purposes of a PATIENT'S care?	25 (20.3)	32 (26.0)	24 (19.5)	36 (29.3)	6 (4.9)
…if you were seeking information for the purposes of a PATIENT'S care and where it is necessary to include the idea of being LGBTQ**?**	22 (17.9)	36 (29.3)	22 (17.9)	37 (30.1)	6 (4.9)
…if you were seeking information for the purposes of a PATIENT'S care, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ**?**	42 (34.1)	33 (26.8)	13 (10.6)	28 (22.8)	7 (5.7)
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH?	27 (22.0)	40 (32.5)	28 (22.8)	24 (19.5)	4 (3.3)
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH and where it is necessary to include the idea of being LGBTQ**?**	23 (18.7)	37 (30.1)	31 (25.2)	27 (22.0)	5 (4.1)
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ**?**	43 (35.0)	33 (26.8)	20 (16.3)	21 (17.1)	6 (4.9)

Explanations offered by respondents for this preference highlight three main concerns: that non-LGBTQ librarians will be insufficiently informed about the specific health concerns of LGBTQ people, that they may react in a stigmatising or discriminatory way, and that they will be less likely than their LGBTQ peers to have specialist knowledge about relevant resources in an especially challenging field where unbiased information is perceived by many as difficult to locate.

Sixteen (13.0%) respondents specifically commented that they prefer to work with an out LGBTQ medical librarian who may intuitively understand LGBTQ health issues without the need to first be 'educated'. One transgender respondent expressed a commonly held view:

> *"I generally assume that medical librarians are not adequately informed about LGBTQ-specific health information unless they themselves identify that way, and would not seek them out unless I knew they identified as LGBTQ."*

This belief may explain the concern of many respondents that non-LGBTQ librarians will struggle to find relevant information. Reliable LGBTQ health information is widely perceived by respondents to be difficult to locate and obtain, while much research published in mainstream journals is considered by respondents to be biased, heteronormative, or cisnormative. In such a challenging information landscape, LGBTQ medical librarians are expected to be more likely to succeed than their non-LGBTQ peers.

Fear of discrimination or of simply an uncomfortable interaction with the librarian also appears in responses, particularly when discussing questions related to personal health or research. Such fears are behind the strong reluctance of some respondents to out themselves during the reference interview, though many of them are more likely to disclose when certain that the librarian is openly LGBTQ.

> *"All too often well meaning people when asked to provide assistance when seeking LGBTQ health information will convey discomfort, avoiding explicit language and avoiding discussing specific topics."*

Results summarised in Table 5 suggest that these concerns have weakened noticeably since 2004, largely due to changes in societal attitudes. *"It feels like there has been a shift in the acceptance one expects, especially in a context where one supposes a certain sophistication or education level in the other, as in a medical librarian."* Forty-five respondents (36.6%) now find it easier to request LGBTQ health information relating to patient care than 10 years ago. This rises to 52 (42.3%) for LGBTQ questions related to the enquirer's own health or their research.

Table 5: LGBTQ health professionals and their perceptions of change over the last 10 years (N=123)

"When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, do you now find it EASIER, THE SAME, or MORE DIFFICULT to consult a medical librarian NOW compared to 10 (TEN) years ago…"

	Is now much more difficult	Is now a little more difficult	Is about the same	Is now a little easier	Is now much easier	I don't know/ No Answer
	N (%)					
…if you were seeking information for the purposes of a PATIENT'S care and where it is necessary to include the idea of being LGBTQ**?**	6 (4.9)	2 (1.6)	15 (12.2)	21 (17.1)	24 (19.5)	55 (44.7)
…if you were seeking information for the purposes of a PATIENT'S care**,** where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ**?**	6 (4.9)	2 (1.6)	15 (12.2)	15 (12.2)	31 (25.2)	54 (43.9)
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH and where it is necessary to include the idea of being LGBTQ**?**	6 (4.9)	2 (1.6)	12 (9.8)	31 (25.2)	21 (17.1)	51 (41.5)

…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ**?**	6 (4.9)	2 (1.6)	13 (10.6)	19 (15.4)	32 (26.0)	51 (41.5)

Distinct information needs of LGBTQ health professionals

Results for these questions were similar, and in some cases almost identical, to those found in the original study. Almost two-thirds of respondents (80, 65.0%) reported that they have distinct information needs, compared to Fikar and Keith's 66.7%. Respondents also gave similar reasons for this view, stating, for example, that it is more likely that they will have LGBTQ patients because those patients will seek out an LGBTQ healthcare professional. The perceived lack of coverage of LGBTQ health issues in mainstream journals was also expressed in both studies. Interestingly, of those who replied "No" to this question, thirteen explained that they did so because they believe that the patient, not the health professional, has the distinct information needs.

A smaller majority (68, 55.3%) find that electronic medical reference sources provide inadequate coverage of these needs. A minority (31, 25.2%) stated that they do not have distinct information needs. Tables 6 and 7 summarise these responses.

Table 6: Distinct Information Needs of LGBTQ Health Professionals (N=123)

	Yes	No	Don't know/ No Answer
		N (%)	
In your opinion, do LGBTQ health professionals have distinct information needs?	80 (65.0)	31 (25.2)	12 (9.8)
Equivalent responses from 2004 Fikar & Keith study	34 (66.7)	10 (19.6)	7 (13.7)
Over the last 10 years there have been changes in the perception of LGBTQ people by society as a whole. Do you feel that there have been any changes in the information needs of LGBTQ health professionals during this time?	85 (69.1)	23 (18.7)	15 (12.1)

Table 7: Coverage of LGBTQ health issues in online medical reference resources (N=123)

	Yes	No	Don't know/ No Answer
		N (%)	
In your opinion, do online medical reference resources provide adequate coverage of LGBTQ health issues?	20 (16.3)	68 (55.3)	35 (28.5)

Eighty-five respondents (69.1%) reported that, in their opinion, there have been changes in the information needs of LGBTQ health professionals since 2004. Changes include pre-exposure prophylaxis (PrEP), male pap tests, IVF treatment for same-sex couples, the appropriate care of older out LGBTQ people, mental health counselling for LGBTQ people, and health promotion. Many other information needs remain unchanged between the two studies, such as those around higher rates of substance abuse and the overall health effects caused by repeated and sustained homophobia and transphobia in patients' daily lives.

Particularly interesting is the rapid and welcome increase in medical literature focusing on transgender and gender nonconforming people, which some respondents ascribed at least partially to the increasing number of people seeking information on physical transition. *"Those of us working with the trans population in particular need up to date information as the body of info is growing rapidly and we often have few knowledgeable colleagues in the immediate area"*. Issues such as hormone therapy, cervical screenings for transgender men, speech/voice therapy, and the care of younger transgender people were frequently highlighted.

Some respondents attribute changes in LGBTQ health information needs to increased societal acceptance of LGBTQ people. *"Personally, I feel that as society as a whole accepts LGBTQ persons, LGBTQ health professionals are more willing and capable to ask for assistance with their personal health care…"* This may be driving the new phenomenon of non-LGBTQ health professionals seeing an increase in the number of out LGBTQ patients they are receiving, recognising their distinct information need, and seeking support from LGBTQ colleagues. *"We are often asked to provide info to patients and colleagues to 'educate' them."*

Respondents who do not believe that LGBTQ health professionals have distinct information needs feel that the crucial issue is the patient's sexuality or gender identity, not that of the healthcare provider. *"Being LGBT doesn't drive the need for specific information, being willing to provide appropriate care to LGBT patients does."* Nevertheless, they also state that LGBTQ health professionals frequently have a higher than average number of LGBTQ patients, are more likely to be sensitive to their health needs, and more willing to seek out specialised information.

Appeal of online chat with the librarian

Librarians were quick to realise the potential of online chat, also known as virtual reference, as a safe and anonymous tool for library patrons with sensitive information requests.[35,36] We therefore added questions to gauge the appeal of this tool, to which 120 responded. Summary results are given in Table 8 while detailed results can be found in Appendix 2.

Table 8: Appeal of online chat for finding medical information – summary responses (N=123)

"Many librarians offer the possibility of CHATTING ONLINE as a way of connecting with library users. This method of connecting with the library is considered by many to be more convenient and also more anonymous. When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, do you find the idea of contacting a medical librarian via online chat to be MORE APPEALING, LESS APPEALING, or ABOUT THE SAME as talking to a medical librarian face-to-face…"

	More appealing	About the same	Less appealing	I don't know/ No Answer
	N (%)			
…if you were seeking information for the purposes of a PATIENT'S care?	48 (39.0)	50 (40.7)	21 (17.1)	4 (3.3)
…if you were seeking information for the purposes of a PATIENT'S care and where it is necessary to include the idea of being LGBTQ**?**	48 (39.0)	49 (39.8)	21 (17.1)	5 (4.1)
…if you were seeking information for the purposes of a PATIENT'S care, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ**?**	48 (39.0)	48 (39.0)	22 (17.9)	5 (4.1)
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH?	53 (43.1)	47 (38.2)	20 (16.3)	3 (2.4)
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH and where it is necessary to include the idea of being LGBTQ**?**	54 (43.9)	47 (38.2)	18 (14.6)	4 (3.3)
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ**?**	52 (42.3)	46 (37.4)	21 (17.1)	4 (3.3)

While respondents report an overall preference for virtual reference, they do not find it to be more appealing for LGBTQ health information requests than for those on general health, whether or not the librarian is openly LGBTQ. and whether the question relates to patient care, or to the respondent's own health or research.

While LGBTQ factors do not affect overall respondent preferences for virtual reference, a variety of individual preferences can be seen from the supplementary data in Appendix 2. Twelve (10.5%) respondents stated a clear preference for virtual reference when seeking LGBTQ health information compared to when seeking general health information:

> *"As a lesbian, I would prefer to talk to another LGBTQ person face-to-face, but if I thought the librarian was straight I might prefer the anonymity of talking online."*

> *"I suppose that if I were concerned that the librarian might be judgmental (or if I just*

didn't know them well), I'd be more comfortable in a more anonymous online environment."

A further 34 (24.4%) find virtual reference to be as appealing as face-to-face interaction, frequently because it is their only means of access to an LGBTQ medical librarian. It is interesting to note that the desire for an LGBTQ librarian often appears to trump the personal preference that a respondent may have for face-to-face interaction when seeking non-LGBTQ health information.

> *"If chatting online meant I could get an LGBT librarian, even from another institution, I'd prefer that."*

The remaining majority are split between those who generally prefer virtual reference (40, 35.1%) due to its convenience, and those who find it less appealing (24, 20.0%) because of either privacy concerns or a preference for face-to-face interaction. A further 10 (8.3%) responses provide no clear picture.

Improving medical library services for LGBTQ health professionals

LGBTQ members of the public often require reassurance that their health questions will be welcome without discrimination;[37] LGBTQ health professionals may seek similar reassurances. Respondents proposed a number of options available to medical libraries wishing to reach out to LGBTQ patrons and visibly demonstrate that they welcome LGBTQ health questions, nearly all of which were also reported in 2004. Common suggestions were the use of signage such as 'Safe Space' posters or stickers, promotion of LGBTQ literature on the library's website, and display of symbols or statements supporting diversity. *"A safe space or rainbow sticker/badge on* [the librarian's] *ID/lanyard/desk/whatever is always a welcome sign."* "*Signage (Safe Spaces poster), a sense that they have even limited competencies in LGBT issues and their limitations.*"

A second set of recommendations, also expressed in the 2004 study, make it clear that the value of openly LGBTQ librarians or LGBTQ allies should not be underestimated. The LGBTQ staff network is one way of raising the profile of such librarians.

> *"If medical librarians have training and/or expertise surrounding 'special populations' this should be marketed in a way that clinical staff know about it. Indeed, if certain medical librarians have this expertise, relative to other librarians in the same library, then these inquiries ought to be handled by them."*

A suggestion not noted in 2004 was for medical libraries and librarians to use social networking to market their services, and to include LGBTQ-friendly statements in order to avoid being seen as *"staid"* or *"traditional"*.

Some respondents offered the alternative view, similarly not noted in 2004, that the librarian receiving an LGBTQ health inquiry may not need to be LGBTQ to respond effectively. These responses emphasised the necessity of relevant LGBTQ-themed training for medical librarians, focusing on the distinct health needs and concerns of LGBTQ people, cultural competency and sensitivity, terminology, and relevant resources.

> *"They* [librarians] *generally have the foundational skills so that adding in an 'LGBTQ' detail is just an added variable like any other. Some BASIC training on terminology and such (so they know the difference between trans needs and LGB, for example) might make their work easier."*

While it can be difficult or impossible for health professionals to access the services of a medical librarian, many responses make it clear that the service is nonetheless highly valued. Respondents see librarians as broadly "progressive" and "non-judgmental," frequently expressing regret that their institution does not provide convenient access to this service. A final comment sums up a commonly expressed view:

> *"I basically trust librarians to be willing to find information for anyone."*

Discussion

This study is the second of its kind. As a follow-up, its limitations are comparable to those of the original study: it is not random, using a convenience sample, and nearly all its respondents are from the US or Canada. Nevertheless we believe that its large sample size (over double that of Fikar and Keith's study), and the significant number of in-depth email interviews, provide a representative sample of LGBTQ health professionals' views.

All health professionals need access to reliable, up-to-date medical evidence to inform their clinical decision-making and to practice evidence-based medicine.[38] A long history of discrimination and oppression means that many LGBTQ people are reluctant to be open about their sexuality or gender identity, despite positive changes in societal attitudes. Numerous studies[39,40] demonstrate that many LGBTQ patients show a marked preference for LGBTQ or LGBTQ-friendly healthcare providers. It therefore follows that LGBTQ health professionals have distinct information needs, either because of their patients' or their own health information needs, an observation confirmed by Fikar & Keith's respondents. This places specific demands on assisting medical librarians.

Other, broader trends are also likely to play a role in this context. The explosion in health information available online is helping to fuel a change in the relationship between patients and healthcare providers, with patients becoming active consumers of information.[41] One study into the use of online health information by Swiss patients[42] found that they may use this information to assess whether a consultation is needed at all, and if so to ensure that they ask useful questions during the consultation. A similar study, of Taiwanese patients,[43] additionally finds that many use online health information to *"probe and verify their doctor's expertise and credibility"*. Assuming that these phenomena extend to LGBTQ patients, we speculate that their health care professionals will receive more complex questions, placing further demands on any assisting medical librarian.

Because of this demanding and sensitive context, and the discrimination and stigma historically experienced by many LGBTQ people, LGBTQ health professionals may have a number of concerns when considering whether to work with a medical librarian on an LGBTQ health question. These range from the potential for discrimination or prejudice during the reference encounter to the belief that a non-LGBTQ librarian is likely to need 'educating'. While this study didn't reveal evidence from any respondent that they had personally experienced discriminatory behaviour from a medical librarian, these concerns can nevertheless be sufficient that the health professional may actively seek an LGBTQ librarian when in need of information, or to completely avoid using a librarian entirely. It should be noted, however, that microaggressions are a part of daily lives of many LGBTQ people,[44] a factor that was not incorporated into our study. We recommend that medical librarians wishing to provide culturally competent services to their LGBTQ patrons be sensitive to these potential concerns and to the negativity experienced by many LGBTQ people that fuels these concerns, and be prepared to adapt the reference interview accordingly. They should also be aware that distinct differences in information needs still exist and that the field is changing rapidly. Furthermore, the vocabulary around sexuality and gender identity is necessarily complex; librarians who are unaware of this may struggle to create comprehensive search strategies and building rapport with patrons.

Health care professionals can benefit from training to understand their LGBTQ patients and colleagues' distinct concerns[45] and to provide a more culturally competent and welcoming environment;[46] we believe the same is true for medical librarians. It is regrettable that medical librarians seeking training in this area have very limited options, despite evidence that the profession is comfortable engaging with questions relating to sex and sexuality.[47] Health professionals therefore have much to gain by, for example, inviting medical librarians into their LGBTQ-specific training sessions, or by collaborating with their medical library on the creation of targeted training materials. Similarly, medical librarians have much to gain from seeking out such opportunities.

The creation of a library subject guide or dedicated resource list on LGBTQ health is another strategy

that would indicate willingness on the part of librarians to engage with LGBTQ health professionals and their questions, and demonstrate that the library has appropriate expertise and knowledge. Few examples of these exist, but the University of Illinois at Chicago[48] and the University of California at San Francisco[49] are noteworthy examples. Considering the logistical and cultural difficulties associated with the retrieval of LGBTQ health information, medical libraries should consider identifying an appropriate librarian as a subject specialist and advertising this prominently.

Further ways to demonstrate the openness of medical librarians to LGBTQ health information requests include a more literal interpretation of "visibility." Signage including rainbow flags and transgender pride symbols continues to be valued by LGBTQ library users, as is continued and persistent library programming that incorporates LGBTQ themes.

Given the reluctance of many LGBTQ health professionals to work with non-LGBTQ librarians, online chat may appear to be an appealing alternative due to its anonymity. Evidence from this study suggests that this appeal may be limited. On the whole, LGBTQ issues play a very limited role in respondent preferences for either online or face-to-face interaction, which are instead explained by convenience of access, or privacy concerns around discussing patient care. A small minority may prefer the anonymity of online chat, or find it is the only available option for working with an LGBTQ librarian. Results from this study suggest that appropriate training for librarians and active outreach, such as through the use of visible indicators of LGBTQ support and understanding, are considerably more powerful tools in this context than online chat.

Some particularly noteworthy changes since Fikar and Keith's work involve shifting attitudes towards reproductive health and transgender and gender-nonconforming identities. The 2004 survey emphasised the unmet needs of same-sex couples planning to have children - *"lesbians who want to become pregnant"* in the words of one respondent. Results from this study place less emphasis on patients' established identities and more emphasis on the necessary health care, citing IVF treatment and cervical screenings for transgender men as topics in need of more developed expertise. Similarly, the language of respondents to the 2004 study, expressing the needs of healthcare professionals working with transgender and gender-nonconforming individuals, focused almost exclusively on surgical procedures such as phalloplasty and vaginoplasty. Respondents in this study explicitly mentioned aspects of physical transition that potentially affect a wider population, such as hormone therapy and speech and voice therapy. This broader focus is also marked with a shift in the language used in MeSH to include the heading *Transgendered Persons*, introduced in 2013.

Perhaps the most telling change is in the very language used to describe this population. Fikar and Keith used the acronym GLBT, whereas this study uses LGBTQ. Shifting the acronym in order to place lesbian women first, and including the Q for queer/questioning individuals, represents significant changes in how this population is studied and represented.

Conclusion

The past decade has seen an explosion in LGBTQ visibility, including in public policy and media representation. This change has been accompanied by an increase in library outreach and programming for LGBTQ users. Despite these improvements many LGBTQ health professionals suspect that their specific information needs will not be met by medical libraries - a concern originally noted by Fikar and Keith that continues to need addressing.

This is an exciting time of change in LGBTQ health. Medical librarians, at the crossroads between information and medical practice, have an opportunity to develop their service and increase their contribution in this field. In working to ensure this, we hope to see interested health professionals and medical librarians collaborating on the creation of new training, ensuring that library collections match the needs of the LGBTQ healthcare team, and in developing tools to ensure maximum access to the results of LGBTQ health research. We also hope to see increased research into the area of LGBTQ health information and information-seeking

behaviours, and a corresponding increase in the evidence-base available to librarians taking an interest in this field.

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Appendix 1: Transcript of Questionnaire

General Information

Firstly, we would like to gather some general information about you. If you wish to remain anonymous, please do not provide any personally identifying information in your responses.

1. Please indicate your age range. Please choose only one of the following:
   [ ] 18 – 30 [ ] 31 – 45 [ ] 46 – 64 [ ] Over 65

2. For how many years have you been a medical professional? Please choose only one of the following:
   [ ] Under 5 years [ ] 6 - 10 years [ ] 11 - 20 years [ ] 21 - 30 years

   [ ] Over 30 years

3. In which general area of healthcare do you work?
   Please write your answer here:
   [ ]

4. In which country do you live? Please choose all that apply:
   [ ] United States [ ] Canada [ ] United Kingdom [ ] Republic of Ireland
   [ ] Australia [ ] New Zealand [ ] Prefer not to answer
   [ ] Other: [ ]

5. Do you identify as LGBTQ? Please choose only one of the following:
   [ ] Yes [ ] No

6. If you replied YES above, do you identify as: Please choose all that apply:
   [ ] Lesbian [ ] Gay [ ] Bisexual [ ] Queer

   [ ] Other: [ ]

7. Do you identify as Transgender? Please choose only one of the following:
   [ ] Yes [ ] No

Your use of medical librarians

We would now like to ask you how likely you are to make use of the services of a medical librarian under different circumstances. We ask firstly about questions related to the CARE OF PATIENTS, and secondly about questions related to YOUR PERSONAL HEALTH or YOUR RESEARCH.

8. When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, how likely is it that you would approach a medical librarian for help under the following circumstances:

   …if you were seeking information for the purposes of a PATIENT'S care?
   …if you were seeking information for the purposes of a PATIENT'S care and where it is necessary to include the idea of being LGBTQ?

…if you were seeking information for the purposes of a PATIENT'S care, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ?

Please choose the appropriate response for each item:
[ ] Very likely [ ] Quite likely [ ] Quite unlikely [ ] Very unlikely
[ ] I don't know/No answer

9. If you found that you made different choices for the three questions above and would like to provide further information about those choices, you may use the box below. Please write your answer here:
[ ]

10. When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, how likely is it that you would approach a medical librarian for help under the following circumstances:

…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH?
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH and where it is necessary to include the idea of being LGBTQ?
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ?

Please choose the appropriate response for each item:

[ ] Very likely [ ] Quite likely [ ] Quite unlikely [ ] Very unlikely
[ ] I don't know/No answer

11. If you found that you made different choices for the three questions above and would like to provide further information about those choices, you may use the box below. Please write your answer here:
[ ]

Perceptions of change over the last 10 years

For some of the questions you have just answered, we would now like to ask you about your perceptions of change over the last 10 (TEN) years. For each of these situations, please consider whether it has become easier or harder to consult a medical librarian compared to 10 (TEN) years ago.

12. When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, do you now find it EASIER, THE SAME, or MORE DIFFICULT to consult a medical librarian NOW compared to 10 (TEN) years ago…?

…if you were seeking information for the purposes of a PATIENT'S care and where it is necessary to include the idea of being LGBTQ?

…if you were seeking information for the purposes of a PATIENT'S care, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ?

Please choose the appropriate response for each item:

[ ] Is now much more difficult [ ] Is now a little more difficult
[ ] Is about the same [ ] Is now a little easier
[ ] Is now much easier [ ] I don't know/No answer

13. If you found that you made different choices for the two questions above and would like to provide further information about those choices, you may use the box below. Please write your answer here:
[ ]

14. When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, do you now find it EASIER, THE SAME, or MORE DIFFICULT to consult a medical librarian NOW compared to 10 (TEN) years ago…?

…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH and where it is necessary to include the idea of being LGBTQ?
…if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ?

Please choose the appropriate response for each item:

[ ] Is now much more difficult [ ] Is now a little more difficult
[ ] Is about the same [ ] Is now a little easier
[ ] Is now much easier [ ] I don't know/No answer

15. If you found that you made different choices for the two questions above and would like to provide further information about those choices, you may use the box below. Please write your answer here:
[ ]

Perceptions of the information needs of LGBTQ health professionals

We would now like to ask a few questions regarding your perceptions of the health information needs of LGBTQ health professionals.

16. In your opinion, do LGBTQ health care professionals have distinct information needs? Please choose only one of the following:
[ ] Yes [ ] No [ ] Don't know

17. Please use the box below to give any further comments you have about this. Please write your answer here: [ ]

18. Over the last 10 years there have been changes in the perception of LGBTQ people by society as a whole. Do you feel that there have been any changes in the information needs of LGBTQ health professionals during this time? Please choose only one of the following:
    [ ] Yes [ ] No [ ] Don't know

19. Please use the box below to give any further comments you have about this. Please write your answer here:
    [ ]

Interactions with medical librarians

We would now like to ask you about any personal experiences you may have had regarding your interaction with medical librarians.

20. Have you ever consulted a medical librarian regarding a question where the idea of being LGBTQ was relevant to the question? Please choose only one of the following:
    [ ] Yes [ ] No

21. Have you ever had a POSITIVE experience with a medical librarian where the concept of being LGBTQ was part of the reference question? Please choose only one of the following:
    [ ] Yes [ ] No

22. Have you ever had a NEGATIVE experience with a medical librarian where the concept of being LGBTQ was part of the reference question? Please choose only one of the following:
    [ ] Yes [ ] No

23. Please use the box below to give any further comments you have about this.
    [ ]

24. In your opinion, are there ways in which the services of medical librarians could be changed to help ensure they are perceived as more LGBTQ-friendly? Please choose only one of the following:
    [ ] Yes [ ] No [ ] Don't know

25. If the answer to the above question was YES, you may use the box below to give further details if you would like. Please write your answer here:
    [ ]

Impact of the Internet

Finally, we would like to ask you a few questions regarding your perceptions of the impact of the INTERNET on the interaction between LGBTQ health professionals and medical librarians.

26. Many librarians offer the possibility of CHATTING ONLINE as a way of connecting with library users. This method of connecting with the library is considered by many to be more convenient and also more anonymous. When you are searching for information to assist you in making a

clinical decision, and where you are not able to easily find or use the necessary resources, do you find the idea of contacting a medical librarian via online chat to be MORE APPEALING, LESS APPEALING or ABOUT THE SAME as talking to the medical librarian face-to-face?

...if you were seeking information for the purposes of a PATIENT'S care?
...if you were seeking information for the purposes of a PATIENT'S care and where it is necessary to include the idea of being LGBTQ?
...if you were seeking information for the purposes of a PATIENT'S care, where it is necessary to include the idea of being LGBTQ, and where you know that the medical librarian is LGBTQ?

Please choose the appropriate response for each item:
[ ] More appealing [ ] About the same
[ ] Less appealing [ ] I don't know/No answer

27. If you found that you made different choices for the three questions above and would like to provide further information about those choices, you may use the box below. Please write your answer here:
[ ]

28. When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, do you find the idea of contacting a medical librarian via online chat to be MORE APPEALING, LESS APPEALING or ABOUT THE SAME as talking to the medical librarian face-to-face?

...if you were seeking information for the purposes of your OWN HEALTH, or for RESEARCH?
...if you were seeking information for the purposes of your OWN HEALTH, or for RESEARCH and where it is necessary to include the idea of being LGBTQ?
...if you were seeking information for the purposes of your OWN HEALTH, or for RESEARCH, where it is necessary to include the idea of being LGBTQ, and where you know that the medical librarian is LGBTQ?

Please choose the appropriate response for each item:
[ ] More appealing [ ] About the same
[ ] Less appealing [ ] I don't know/No answer

29. If you found that you made different choices for the three questions above and would like to provide further information about those choices, you may use the box below.
Please write your answer here:
[ ]

30. In your opinion, do online medical reference resources provide adequate coverage of LGBTQ health issues? Please choose only one of the following:
[ ] Yes [ ] No [ ] Don't know

31. You may use the box below to give further details if you would like. Please write your answer here:
    [ ]

Final comments

32. Do you have any other comments about the information needs of LGBTQ healthcare professionals and their interactions with medical librarians which you would like to share? Please write your answer here:
    [ ]

33. Please indicate below if you would like a copy of the final results, or if you are willing to be contacted to clarify your answers or provide further information. Please choose all that apply:
    [ ] I am willing to be contacted to provide further information about my answers.
    [ ] I would like a copy of the final results.

(following question displayed only if at least one box ticked in Q33)

34. Please provide your email address. Please write your answer here:
    [ ]

Appendix 2: Appeal of online chat for finding medical information – individual responses

Possible question responses: 1 = more appealing / 2 = about the same / 3 = less appealing / X = No answer, "I don't know"

"Many librarians offer the possibility of CHATTING ONLINE as a way of connecting with library users. This method of connecting with the library is considered by many to be more convenient and also more anonymous. When you are searching for information to assist you in making a clinical decision, and where you are not able to easily find or use the necessary resources, do you find the idea of contacting a medical librarian via online chat to be MORE APPEALING, LESS APPEALING, or ABOUT THE SAME as talking to a medical librarian face-to-face…

a. …if you were seeking information for the purposes of a PATIENT'S care?
b. …if you were seeking information for the purposes of a PATIENT'S care and where it is necessary to include the idea of being LGBTQ**?**
c. …if you were seeking information for the purposes of a PATIENT'S care, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ**?**
d. …if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH?
e. …if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH and where it is necessary to include the idea of being LGBTQ**?**
f. …if you were seeking information for the purposes of YOUR OWN HEALTH or FOR RESEARCH, where it is necessary to include the idea of being LGBTQ, and where you knew that the medical librarian was LGBTQ?"

	Question					
#	**a.**	**b.**	**c.**	**d.**	**e.**	**f.**
1-37	1	1	1	1	1	1
38-40	1	1	1	2	2	2
41	1	1	1	3	1	1
42	1	2	1	1	2	1
43	1	2	1	2	2	2
44	1	2	2	1	2	1
45	1	2	2	1	2	2
46-47	1	2	2	2	2	2
48	1	3	1	2	3	3
49-78	2	2	2	2	2	2
79	2	1	1	1	2	2
80	2	1	1	2	1	1
81	2	1	2	1	1	1
82	2	1	2	1	1	2
83-84	2	1	2	2	1	2
85	2	1	3	1	1	1
86	2	2	1	3	1	2
87	2	2	1	2	2	1
88-92	2	2	2	1	1	1
93-94	2	2	2	1	2	2
95	2	2	2	2	1	1
96	2	2	2	1	X	X
97	2	2	2	2	1	1
98	2	3	3	3	3	3
99-113	3	3	3	3	3	3
114	3	3	3	1	1	1
115	3	3	3	2	1	3
116-117	3	3	3	2	2	2
118	3	2	3	3	2	3
119	3	X	X	3	3	3
120	X	X	X	2	2	3
121-123	X	X	X	X	X	X