Article title: Health sciences libraries in Germany: new directions

Author Details
Dr. Helge Knüttel, M.A. (LIS) Corresponding author
Subject & Liaison Librarian, Literature Searches & Systematic Reviews
University of Regensburg, University Library, Universitätsstraße 31
93053 Regensburg, Germany
Email: helge.knuettel@bibliothek.uni-regensburg.de
ORCID: 0000-0002-2654-6517
Twitter Handle: None

Dr. Evamaria Krause
Subject Liaison Librarian and Head of the Medical Library
Augsburg University Library, Universitätsstraße 22
 86159 Augsburg, Germany
Email: evamaria.krause@bibliothek.uni-augsburg.de
ORCID: 0000-0002-4946-6544
Twitter Handle: None

Dr. Martina Semmler-Schmetz
Head of the Library for the Medical Faculty of Mannheim of Heidelberg University
Theodor-Kutzer-Ufer 1-3
68167 Mannheim, Germany
Email: semmler-schmetz@medma.uni-heidelberg.de
Twitter Handle: None

Dr. Iris Reimann
Subject Liaison Librarian and Head of the Medical Library of the University Library of RWTH Aachen
University
Pauwelsstraße 30,
52074 Aachen, Germany,
Email: reimann@ub.rwth-aachen.de
Twitter Handle: None

Maria-Inti Metzendorf, Graduate Information Scientist, M.A.
Information Specialist, Cochrane Metabolic and Endocrine Disorders Group,
Institute of General Practice, Medical Faculty of the Heinrich-Heine University,
Moorenstr. 5,
40225 Düsseldorf, Germany,
Email maria-inti.metzendorf@med.uni-duesseldorf.de.
Twitter Handle: None

Feature Editor
Jeannette Murphy
Retired Senior Research Fellow in Health Informatics
The Farr Institute of Health Informatics Research
University College London, CHIME
London, UK
Email: j_murphy_london@outlook.com
Twitter Handle: @MurphyJeannette

Abstract

This feature is part of a series about medical library services in various countries. It gives an overview of the state of and selected current developments of medical library services to support research, education and clinical practice in Germany. Findings from an online survey and issues of access to health information are discussed in relation to the German health care system.

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Abstract

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Introduction

The aim of this article is to provide an overview of libraries in Germany that support health care practice, research, and education by putting them into the wider context of German health care. It is informed by a survey of German health sciences libraries and by the professional experience of the authors, all of whom are members of the German Medical Library Association (AGMB).

Health care in Germany

With a population of 82 million and as a member of the Group of Seven (G7) as well as the European Union (EU), the Federal Republic of Germany is a leading industrial nation situated in Central Europe. The government and its administration are organised into four levels: federal, state, regional, and local.

The German health care system is characterised by a distribution of power amongst these levels. There is a strong focus on self-governance in relation to finances as well as the provision of health care. Consequentially, relations between the various parties are complex (Busse, Blümel, & Spranger, 2017). Health coverage in Germany is nearly universal. In 2014, about 87 % of the population had statutory health insurance, another 11 % had private health insurance, and the rest of the population received health insurance through specific governmental schemes (Busse, Blümel, Knieps, & Bärnighausen, 2017). The total expenditure on health was €333.5 billion in 2015 (11.1% of GDP) which is the highest per capita spending in the EU. There are, however, signs of overprovision of services and concerns regarding the cost effectiveness and appropriateness of care (OECD/European Observatory on Health Systems and Policies, 2017).

The total number of health personnel is 5.6 million including 400,000 physicians (365,000 practicing, 150,000 in private practice) and 91,000 dentists (71,000 practicing) (Busse, Blümel et al., 2017; Federal Statistical Office Germany [Destatis], 2019). Clinical education is provided by 39 medical schools and 30 dental schools (German Rectors' Conference). Nursing and allied health staff now have several options to earn academic degrees, but currently the majority lack academic qualifications.

Survey of German Health Sciences Libraries

In a web-based survey that ran for three weeks in November and December 2019 we asked for services provided by German medical libraries. Invitations were sent out as emails to members of AGMB (see below), to members of the information management working group of Deutsches Netzwerk Evidenzbasierte Medizin and the medbib-l mailing list for medical librarians in the German-speaking countries. The survey was derived from a recent survey conducted in Switzerland (Bissels, Klein, & Kaenel, 2019) and had 25 questions about the library's setting, the resources offered, services provided, and staffing. Descriptive statistics of the 75 full responses were prepared using LimeSurvey (Version 3.17.17+190918) and Excel (see Table 1 and data availability statement).

Access to health information

The fragmentation of responsibilities in the German health care system affects the supply and effective use of information. At present there is no central strategy for the provision of an adequate supply of evidence-based information despite the immense amount of resources spent. Efforts to translate knowledge so it is in a format which meets the needs of health professionals and the public fall well behind those in other countries (Lenzen-Schulte, 2013). Moreover, in recent years existing resources at the national level have been substantially reduced. A complex division of competencies between federation (health sector) and states (cultural sector including science) results in a separation of health practice and science. Currently, the task of providing information is predominantly the responsibility of the science sector. There is little understanding that evidence is a prerequisite for good health care. As a result, institutions and financial resources from the science sector, rather than the much larger health sector, are used to provide health information. One example of the problems this causes is ZB MED, the world's second largest medical library. It is a main pillar of Germany´s cooperative library system providing access to health literature. However, as ZB MED is part of the research sector, its existence has been under threat since 2015 when it received a negative evaluation as a research institution (rather than an infrastructure institution). Currently, it is in a transitional phase, and is focussing its activities on developing new research areas such as data science. As a result, the role of supplying literature, despite its significance on a national scale, is now set to play a secondary role. A second example is DIMDI, the German Institute of Medical Documentation and Information, which, when site licenses were unaffordable, took a leading role in enabling access to many data sources, and provided powerful and efficient cross-database searching capabilities. Despite protests, in 2017 the hosting of literature databases was completely abolished.

Generally, access to health evidence is best at universities with medical schools. We only have anecdotal reports from other hospitals which suggests that the supply of information varies and is sometimes described as being virtually non-existent. In primary care, doctors and allied health staff are basically expected to keep themselves informed about most health topics, and the same is true for the general population. In 2014 the Alliance of German Research Organizations launched an initiative "Projekt DEAL" which aims to transform the scientific publication system to a full open access model by means of nationwide "publish and read" agreements with publishers. Starting with the largest scientific publishers, three-year contracts with Wiley (2019) and Springer Nature (2020) have been signed, while negotiations with Elsevier have come to a standstill. The initiative's goals are embraced by most, but the process holds many uncertainties for all parties involved. Unfortunately, non-university hospitals, other health institutions and primary care staff are excluded from the publish-and-read contracts of Projekt DEAL.

Medical libraries, librarians and information professionals

Librarians and information specialists working in medical and health science libraries in German-speaking countries are eligible to join the German Medical Library Association (AGMB e.V.) founded in 1970. It promotes medical librarianship and information provision and supports professional development as well as national and international cooperation between medical libraries. Annual conferences and workshops provide its 400 members with the opportunity to exchange experiences and discuss current developments.

University libraries are responsible for the supply of information and literature to most medical faculties and universities of applied sciences for health professions, often in the form of a medical branch library, but in some cases there is only a subject liaison librarian. Additionally, university hospitals often provide smaller departmental libraries resources for continuing education and/or patient libraries. In non-university hospitals the situation is similarly heterogeneous. Larger hospitals in particular may have scientific libraries; some hospitals provide library services for both doctors and patients, while others only have patient libraries. There are around 2,000 hospitals in Germany (Busse, Blümel et al., 2017) but only about 100 hospital librarians are members of AGMB.

In addition, medical libraries are found in non-university research institutions and health authorities. Institutions directly funded by the Federal Ministry of Health (like the Bundesinstitut für Arzneimittel und Medizinprodukte (BfArM), Bundeszentrale für gesundheitliche Aufklärung (BZgA), Paul-Ehrlich-Institut and Robert-Koch-Institut) have long been part of the German health system. Most of them have small specialised libraries focused on delivering traditional library services. Some of them have tentatively started to offer information services and research support, but dedicated information managers providing professional information services are rare.

Three institutions which play an important role in the German health system differ from those described above. They are independent of the Federal Ministry of Health and operate on a high-level of self-governance. They have professional information management departments employing information specialists and provide state of the art services comparable with Anglo-American standards. These are the Institute for Quality and Efficiency in Healthcare (IQWiG), the Institute for Quality Assurance and Transparency in Health Care (IQTIG) and the Federal Joint Committee, a supreme decision-making body for the health care provided by the statutory health insurance.

In contrast to other countries such as the UK, in Germany the creation of clinical guidelines is the task of scientific medical societies. Guidelines are often prepared by physicians working within these societies. Even though they are assisted in this process by the AWMF (Association of the Scientific Medical Societies in Germany), neither the medical societies nor the AWMF employ dedicated information specialists. As a result, in recent years, medical librarians linked to university libraries are increasingly being requested to assist guideline teams.

The staff situation at public-sector institutions in Germany is influenced by a long history of detailed laws and tariffs, which stipulate a strict hierarchical structure. Based on formal qualifications, individuals are assigned to a particular pay grade and have little opportunity for a later rise to a higher salary group. Training of librarians happens at three levels: an apprenticeship with dual training, a LIS bachelor's degree, or a subject-oriented academic degree followed by a LIS masters (or equivalent training). Recently, the German Council for Scientific Information Infrastructures (RfII) declared that the public

salary system's emphasis on formal degrees created barriers for staff to gain research-related competencies. It called for more scientifically qualified staff in central infrastructure units such as libraries to achieve the desired embedding of research and infrastructure (German Council for Scientific Information Infrastructures, 2019). Despite the lack of research activities and support in German research libraries noted by RfII, current developments suggest that medical libraries may well lead the movement towards improvement.

New library services

In our survey we inquired about the services provided by German medical libraries. The responses give a mixed picture regarding the current state of collaborative services to support teaching, research and clinical practice. Combined with other developments, they hint at a profession on the move (See Table 1). Apart from lectures, courses or seminars within the medical curriculum and optional training sessions, a majority of libraries from academic or research institutions offer a variety of consultation and support services for their target groups. While most assist with the development of search strategies, full mediated searches for researchers working on systematic reviews, clinical guidelines, and similar publications (Spencer & Eldredge, 2018) are less common. Clinical librarian services (Brettle, Maden, & Payne, 2016) and support for the critical appraisal of clinical evidence (Maden-Jenkins, 2010) are rare, as is research in the field of library and information science.

Note - Insert table 1 about here

Research data management

In recent years, university libraries in Germany have built up research data management (RDM) services comparable to developments at universities worldwide. Usually libraries collaborate with university computing centres and central research departments and form collaborative networks on a regional level. In our survey, about 60% of the libraries from institutions conducting medical or health research reported that their organization offers RDM consultations or support for RDM. In half of these cases, the medical library team provides the RDM support. This proportion is lower than for other services. This may be due to fact this is a complex and rapidly evolving field. However, there are many chances for medical libraries to get involved in RDM. In the next few years with the establishment of a national research data infrastructure (NFDI), it will be important to bring these services to local researchers and students.

New areas in teaching

Laws and regulations governing the German medical curricula are currently being revised in order to adapt the structure and content of the curricula to meet current requirements imposed on the medical profession (Bundesministerium für Bildung und Forschung, 2017). There is a greater emphasis on teaching basic science skills with a specific focus on evidence-based medicine. A nationwide implementation of structured doctoral programmes, designed to impart scientific writing and research skills, aims to improve the quality of doctoral degrees in medicine. This presents both challenges and opportunities for academic medical librarians in Germany. They have taught voluntary as well as mandatory courses on information literacy skills for many years. Given the new requirements for their user groups, academic medical libraries are challenged to go beyond their traditional expertise and cooperate with researchers and clinicians to design new courses on scientific writing and the principles of evidence-based medicine.

Conclusions

In this narrative review, informed by a recent survey and by our professional experience, we highlight the state of and selected current developments in health sciences libraries in Germany. The German health care system consumes huge financial resources. A major barrier to progress stems from the separation that exists between institutions of health care practice and science. The provision of information is generally the responsibility of the science sector. In recent years, access to evidence-based information for health care practice in Germany have not been adequate. At the same time current large-scale efforts to improve access to scholarly information (e.g. Projekt DEAL) are restricted to the academic/research sector and fail to benefit the health care sector.

Non-traditional library services provided by many German health sciences libraries are experiencing increasing take-up. These services include teaching and focus on research support such as one-on-one consultations for students and researchers, mediated searches for systematic reviews and guidelines, as well as support for open access and research data management. Some activities which are well-established in other countries, such as clinical librarian services, support for critical appraisal of clinical information and research in library/information science, are still rare in Germany.

Despite these weaknesses current developments indicate that German health sciences libraries are working to overcoming the manifold structural obstacles they face and adapting their services to meet their patrons' evolving needs.

Data Availability Statement

The survey and the survey responses in reusable formats are available under an open access license from http://doi.org/10.5283/epub.41414 and http://doi.org/10.5283/epub.41415, respectively.

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For details on how to contribute to this feature please contact:
Jeannette Murphy
Honorary Research Fellow
CHIME, University College London
The Farr Institute of Health Informatics Research, London
222 Euston Road
United Kingdom
NW1 2DA
E-mail: j_murphy_london@outlook.com

Table 1 Services offered by medical libraries in Germany (survey answers given as absolute numbers). Total number of completed responses: *n* = 75 libraries.

Services offered	Types of libraries					
	Medical faculty or university hospital	Clinic/policlinic/ institute at a larger hospital	Non-university hospital	Nursing school/ school for other allied health professionals (2)	Research institution	Others
	(36)	(9)	(11)		(7)	(10)
Mediated searches for knowledge synthesis	11	2	2	1	4	3
Assistance with development of search strategy	29	4	3	2	7	6
Lectures within curriculum of the medical / nursing faculty	20	0	0	2	2	3
Optional training sessions	32	0	4	1	6	6
Consultations for Master students	30	4	8	0	6	4
Consultations for PhD students	31	4	9	1	7	4
Support for post-docs	26	0	1	1	7	2
Clinical librarian service	0	2	2	0	0	0
Support for critical appraisal of clinical evidence	3	1	1	0	0	1
Open Access support	19	2	2	0	7	6
Consultations on / support for research data management	10	0	0	0	5	2
Research in librarianship/ information science	2	0	0	0	2	1

Research support resulted in (co-)authorship in peer reviewed publications	10	0	0	0	2	1