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Making a difference to healthcare in Leeds: Seven years of measuring the impact of NHS knowledge and library services

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Making a difference to healthcare in Leeds, UK: Seven years of measuring the impact of NHS knowledge and library services

The services offered by healthcare knowledge and library specialists offer tangible benefits for healthcare professionals, some of which can be measured through user feedback. The searches undertaken by this highly specialist workforce can save the time of health professionals and provide economic benefits to the UK NHS. The results of this seven-year study of knowledge and library service interventions in the Leeds health economy demonstrate the resulting primary impacts for library and knowledge service users and estimates the local economic benefits of the evidence searches provided over the same period.

Keywords: Impact, Outcomes, Values, Benefits, Health professionals, Information skills training, Literature searching

Introduction

Leeds Libraries for Health is a partnership of knowledge library and information services providing specialist support for healthcare professionals across the Leeds health economy, United Kingdom. The partnership includes the library services aligned to Leeds Teaching Hospitals NHS Trust, Leeds and York Partnership NHS Foundation Trust, and Leeds Community Healthcare NHS Trust where the library also serves Primary Care staff in Leeds.

To give an idea of the scale of the service, recent figures from NHS Digital (2023) show a healthcare workforce of 23,466 (Whole Time Equivalent - WTE) across the three Leeds NHS Trusts. The workforce is served by 10 WTE qualified knowledge and library professionals (NHS England, 2023) making the city-wide staff ratio 1:2,346.

Since 2017 these NHS knowledge and library services have collected impact data from healthcare staff making use of their services. This study presents an analysis of six years of impact data to identify the key areas in which knowledge and library services are reported as having an impact. It also draws on activity data to calculate the economic benefits delivered by local services based on previously reported findings.

Background:

The impacts of knowledge and library services within the health sector have been explored extensively in the literature. Studies by the International Federation of Library Associations and Institutions (1) and Mallender (2) summarise the overall trends. Impacts associated with the use of healthcare knowledge and library services include safer and more effective treatment and care for patients; improved governance and risk assurance for healthcare organisations; and improved learning, education and training opportunities for healthcare staff and students.

During 2017 an impact toolkit was developed under the auspices of Health Education England's Knowledge for Healthcare programme aimed at providing resources for NHS knowledge and library services to monitor their impact at local level (3). Leeds Libraries for Health made use of a generic questionnaire included within this toolkit to invite user responses relating to the impact of local knowledge and library services.

Objectives:

The objectives of this study are twofold. First to analyse data collected from the Impact Questionnaire and to draw conclusions from this about the principal areas in which NHS knowledge and library services in Leeds are impacting upon healthcare. Data is available covering more than six years of impact.

Secondly to apply nationally generated figures of the economic benefit of knowledge and library services to the Leeds NHS Library Services. This helps to identify both existing economic benefits and the potential additional economic benefits available with further investment.

The exercises will enable NHS knowledge and library specialists in Leeds to increase their own awareness of the areas in which their services are reported as having the highest impacts. The findings will also provide evidence for stakeholders considering further investment in the service.

Methods

The research tool used within this study is the NHS Knowledge and Library Services Generic Impact Questionnaire developed by Ayre et al. (3) and validated by Urquhart (4). The full details of the questionnaire are described fully by Ayre and colleagues but is summarised here for convenience.

The process makes use of a critical incident approach whereby users of NHS knowledge and library services are contacted following a specific intervention by the service, for example an evidence search or information skills training session. Sufficient time is given following the intervention before seeking impact details, recognising that impact can take time to manifest. Users are then contacted by email and asked to

provide details of the service used, the motivation or reason for approaching the library for assistance, and to select any areas of impact from a predetermined list of options supplied. There is an option to indicate impacts which have already occurred, and to predict probable future impacts of the library intervention. For simplicity, this paper will focus on existing rather than potential future impacts.

The process relies on the cooperation of library service users in completing the survey. It is recognised that, as the respondents self-select whether they wish to respond, this may provide limitations in terms of the claims which can be made from the resulting data. Nevertheless, the survey provides a manageable process for collecting quantitative data about the impacts of the service. As respondents are invited to provide contact details if they are willing to provide additional information, there is also potential for developing more detailed case studies based on the initial responses.

Calculations of the economic benefit of knowledge and library services is based on local activity data collected on the number of evidence searches undertaken in Leeds over the last seven years, combined with findings from a national project to identify the economic benefits of evidence searches to the NHS in England.

Results:

In the period between January 2017 and March 2023 a total of 198 responses were made to the Generic Impact Questionnaire with responses included from the users of all three services in the city.

Services Used

The questionnaire was sent to healthcare colleagues who had made use of the knowledge and library services evidence searching and information skills training services. It is therefore not surprising that respondents identify these two services as the two most popular services used.

Table 1

Library services used by survey respondents.

Name of Service	Numbers using the service
Training or e-learning	99
Literature or Evidence Search	263
Supply of article, book, document	6
Access to electronic or print information	4
Clinical or Outreach Librarian Services	3
Current Awareness or Alerts	3
Access to IT (Information Technology) facilities	3

Impacts resulting from use of library services

Colleagues were asked whether their use of knowledge and library services had contributed to any of a series of impact types. More than one option could be selected hence the percentage summary exceeding 100 in the table below. Colleagues were also invited to suggest whether there had been an immediate impact, or whether there was likely to be a future impact. For simplicity we are only exploring reported immediate impacts in this study.

Table 2

Library services used by survey respondents.

Immediate Impacts Reported	Number	Proportion
Contributed to personal / professional development	260	68%
More informed decision making	179	47%
Contributed to service development or delivery	130	34%
Improved the quality of patient care	95	25%
Facilitated collaborative working	88	23%
Reduced risk or improved safety	43	11%
Saved money or contributed to financial effectiveness	20	5%

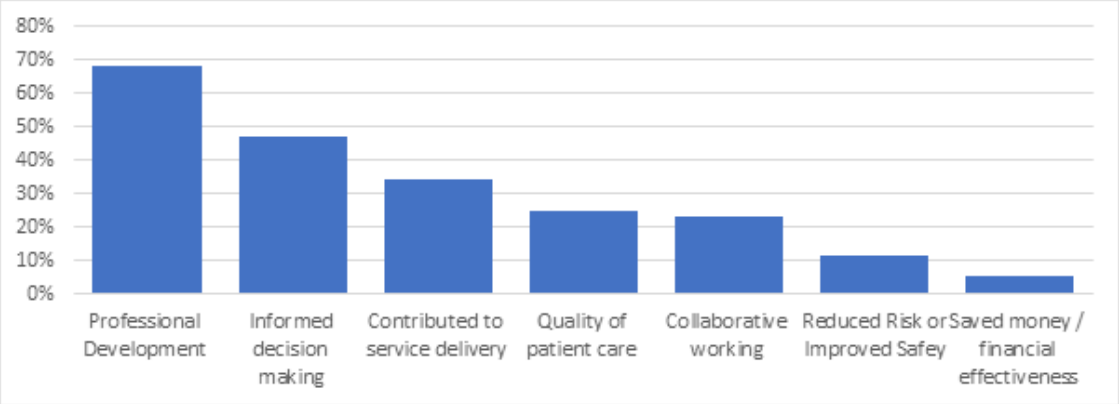
Discussion:

The findings of the survey suggest that personal impacts are the most common results of impact with knowledge and library services with 68% of respondents noting an impact on personal and professional development.

Organisational impacts are also reported in encouraging numbers. 47% of respondents report more informed decision making, reinforcing the value of using specialised knowledge and library professionals to assist in locating evidence.

Table 3

Immediate Impacts Reported



To note that respondents were able to record more than one type of impact for each intervention.

Over 30% of respondents reported that the knowledge and library service was able to impact upon service development or delivery. This is another important measure of organisational impact suggesting that Leeds NHS Trusts are ensuring that knowledge and library specialists are approached to ensure that service changes and developments are evidence based.

Around a quarter of respondents believed that their interactions with library specialists had led to improvements in the quality of patient care and/or reduced risk.

It is interesting that only 5% of respondents suggested that the services of the knowledge and library specialist contributed to saving money or financial effectiveness. This is probably due to a combination of two factors. First there is often a considerable time lag between the actions of the knowledge and library service in assisting with an evidence query or other intervention, health professionals acting on the resulting evidence, and the eventual outcome. Knowledge and library specialists may request impact feedback before the full financial effects of an intervention are known. Secondly the lack of immediate visibility of the savings made to the healthcare staff receiving the service. According to other research (5) much of the savings made are in the economic benefits associated with the library and knowledge specialists undertaking searches instead of clinical or management staff and this may not always be an obvious saving to the healthcare professional involved in the interaction.

Edwards et al. (5) focus of the economic benefits of healthcare knowledge and library specialists providing evidence searches for staff. Due to their experience and expertise, knowledge and library specialists can perform these searches in less time than other healthcare staff. They are also usually employed on a pay grade below that of the healthcare professionals requesting the search. Calculations in the above study identify that these twin factors led to NHS knowledge and library services in England producing an estimated economic benefit of £37 million per annum through the 32,463 evidence searches undertaken during 2018-19 alone.

During the 7 years covered by this study Leeds NHS libraries performed a total of 4,348 evidence searches (7). Scaling using the same figures as the Edwards study this

would suggest an estimated economic benefit of just under £5 million over the seven years covered by this study, or an average of £708,000 per annum.

The NHS Knowledge and Library Services Staff Ratio policy (6) recommends that NHS organisations work towards a ratio of no less than 1 qualified knowledge and library specialist for every 1,250-healthcare staff. To implement this in Leeds would mean an additional 8.8 Full Time Equivalent knowledge and library specialist posts.

Although this would require additional investment in local knowledge and library services, the model outlined by Edwards (5) above suggests that the additional economic benefit if these staff were in place would equate to an additional £623,000 per annum, an overall benefit of £1.3 million per annum across the city.

Conclusions

The impact evidence collected over seven years suggests that NHS knowledge and library services are making a range of impacts on healthcare in Leeds. The most frequent impacts reported are on personal and professional development, but a sizeable number of respondents highlighted impacts in the area of informed decision making and improved service development and delivery.

Although very few respondents were able to identify impacts relating to saving money and financial effectiveness, extrapolation from a recently published study suggests that NHS knowledge and library specialists in Leeds provided an economic benefit of just under £5 million during the seven years of the study.

Figures from the same study suggest that implementing the NHS knowledge and library services staffing ratio would deliver an additional economic benefit across the city totalling £1.3 million per annum.

NHS England's Knowledge and Library team has recently piloted additional alternative models of collecting data about the impact of services. Leeds NHS Library partners look forward to engaging with these tools to continue to track the impacts and benefits within healthcare.

Disclosure statement

Dominic Gilroy, Heather Steele, Helen Swales and Ryan Ford are employed by NHS knowledge and library services within the NHS in Leeds. Dominic Gilroy was part of the working group which developed the knowledge and library services impact tool (3) and was involved in the study to evaluate the economic benefits of NHS knowledge and library specialists (5).

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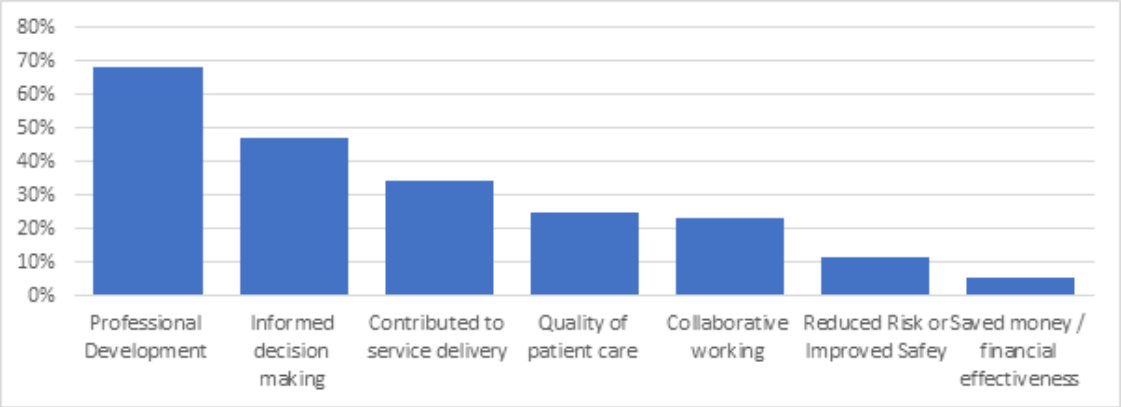
Table 3. Immediate Impacts Reported



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