

NHS Library and Knowledge Services in England

Recommendations to improve the staff ratio for the number of qualified library and knowledge specialists per member of NHS workforce

The NHS requires proactive knowledge services as business-critical instruments of informed decision-making. These services call for a blend of expertise, encompassing:

- embedded roles in clinical and management teams providing decision-ready information,
- knowledge managers who mobilise corporate knowledge and staff 'know-how' to underpin strategy and operations,

There is significant variation in the ratio of qualified librarians and knowledge specialists to healthcare staff, leading to inequitable service provision across England. There is insufficient capacity to maximise the benefit of these roles to inform evidence-based improvement in care, the spread of innovation, improved productivity and cost savings. This means that the service is not uniformly able to deliver evidence for #AMillionDecisions. The introduction of a recommended staff ratio is a key action by Health Education England to enable individual organisations to identify and address that risk.

Recommendations

1. To optimise the benefits for the NHS of the emerging new roles for librarians and knowledge specialists, HEE recommends that all NHS organisations:
 - (i) review regular reports of the positive impact of the library and knowledge service on outcomes
 - (ii) work with the local library service manager to prioritise allocation of clinical librarian, knowledge manager and other embedded roles to specialities
 - (iii) take incremental steps to improve the staff ratio between qualified librarians and knowledge managers per member of the NHS workforce, through role redesign and by expanding this specialist workforce
2. HEE recommends that over time, all NHS organisations aspire to achieving a much-improved staffing ratio
3. HEE recommends that those NHS organisations with a staffing ratio in the region of the current average of 1 qualified librarian to 1,730 or more healthcare staff, strive to achieve a ratio of at least 1 qualified librarian or knowledge specialist per 1,250 WTE NHS staff.
4. HEE commits to monitoring the staff ratios annually and to reviewing the recommended ratio in three years' time.

1. PURPOSE

Prepared at the request of the Health Education England Executive in August 2018 and approved by HEE Executive on 5 November 2019, HEE has adopted as policy a recommendation to improve the staff ratio for the number of qualified library and knowledge specialists per member of the NHS workforce. This policy recommendation underlines the opportunity for NHS organisations to drive improvements in both the quality of care and productivity with the assistance of clinical librarian and knowledge manager roles. This policy supplements HEE's Policy on NHS Library and Knowledge Services in England published in 2016.¹

2. APPROACH

To determine this recommendation for improving the staff ratio HEE has:

- analysed performance data derived from the HEE Library Quality Assurance Framework (LQAF) in relation to workforce data
- identified services from which staff have shared examples of the positive impact of the library service
- identified services with clinical librarian and knowledge manager roles
- looked for correlations between all these facets.

3. KNOWLEDGE SPECIALISTS: BUSINESS CRITICAL TO HEALTH CARE

Healthcare is a knowledge industry. Enabling the workforce to access high quality evidence is fundamental to the delivery of high quality care. HEE's strategic library and knowledge service team works with NHS organisations across the regions to promote HEE's vision:

“NHS bodies, their staff, learners, patients and the public use the right knowledge and evidence, at the right time, in the right place, enabling high quality decision-making, learning, research and innovation to achieve excellent healthcare and health improvement.”²

Currently there are 624 posts for qualified librarians in NHS trusts.³

3.1 Embedded roles

Our 21st century NHS requires proactive knowledge services as business-critical instruments of informed decision-making and innovation. These services call for a blend of expertise within knowledge services teams, encompassing:

- embedded roles in clinical and management teams providing decision-ready information,
- knowledge managers who mobilise corporate knowledge and staff 'know-how' to underpin strategy and operations,

These emerging roles are pivotal in driving quality improvement and reducing inappropriate variation in care and cost. Aligned to multidisciplinary teams, they search, and often synthesise and summarise information, to release the time of

health professionals. These roles foster a culture of using evidence from research and best practice and of utilising corporate knowledge and staff know-how to best advantage. They facilitate knowledge sharing, enabling the workforce to develop skills to share their learning and spread innovation. Librarians and knowledge specialists raise staff awareness of the impact of health literacy issues. Finally, they play a role in equipping colleagues for the digital age, enabling NHS staff to develop digital skills.

3.2 Data on embedded roles

In 2018/19 47% (n=86) of NHS funded library and knowledge services had a dedicated post for either a clinical or outreach librarian, or other embedded role. Demand for such roles is increasing. Between 2014 and 2019 the proportion of services which offer some kind of outreach, clinical or embedded element as part of their service has risen from 58% to 63%.⁴

3.3 Cross-referencing clinical librarian services with performance

The team of the Clinical Evidence Based Information Service (CEBIS) at University Hospitals Coventry and Warwickshire NHS Trust cross-referenced usage of CEBIS during 2017-18 with the subsequent CQC Inspections and ratings of ten specific services in April 2018.⁵ The findings indicate that departments may benefit from optimising the expertise of clinical librarians:

- 5 of the 7 services rated as 'Good' made significant use of CEBIS, requesting between 26 and 72 searches in the year.
- 3 departments rated as 'Requires improvement' made limited use of CEBIS, requesting between 3 and 9 searches each 2017/18

These data are not fully conclusive since two services rated 'Good' did not place any enquiries. Nevertheless, this case is illustrative of the positive benefits derived by healthcare services that optimise the expertise of clinical librarians. The ratio of qualified knowledge services staff to healthcare staff at Coventry and Warwickshire is 1:1,082

3.4 Yielding a return on investment

A study conducted in the critical care unit at Wirral University Teaching Hospital NHS Foundation Trust found that an embedded clinical librarian role "helped staff to learn, develop and improve the quality of their care. It nurtured an evidence-based culture across the department and generated a positive financial value from saving staff time, supporting their professional development and improving patient care."

With academic research support from the University of Liverpool and the Centre for Health Economics and Medicines Evaluation, Bangor University, this recent study also reports that "for every £1 invested in the knowledge mobilisation model, a financial value of £1.18 to £3.03 was generated".⁶

4. STRATEGIC DRIVERS

HEE is the strategic lead for NHS funded library and knowledge services in England. As the centre for analysis and expertise, we support changes the NHS already plans to make (1-5 years), to support local delivery of new roles and skills at scale and pace and anticipate future changes over the next 5+ years, providing national leadership on the opportunities and choices for the wider system so that we can futureproof the service and take advantage of the latest science and technology

As a system partner, working collaboratively to align our levers, investments and plans to ensure we have the workforce to deliver 21st century care for patients, with a unique responsibility for taking a longer view, committed to ensuring that the right knowledge and evidence is used at the right time at the Board and the bedside, at the clinic and in the community.

- HEE's policy is to ensure equitable access to knowledge services and evidence resources and to develop the knowledge specialist workforce with the right skills to deliver business-critical services.¹
- Knowledge for Healthcare, HEE's strategic framework, highlights that 'increasingly the NHS will see knowledge specialists embedded within clinical, commissioning and management teams' (p.26).²
- The Topol Review identified a need to increase the numbers of knowledge specialists in the NHS (recommendations AIR5/DM4).⁷

As the NHS gears up for the digital future, there is a window of opportunity in which to ensure that the right numbers of qualified librarians and knowledge specialists are in place to inform an evidence-based NHS and to support a digitally-enabled workforce.

5. STAFF RATIOS: CURRENT POSITION

The ratio of qualified librarians and knowledge specialists to the NHS workforce in England is 1:1,730. This figure conceals significant variation between regions, with regional averages varying from 1:1,180 in London to 1:2,255 in the North. See Appendix 1.

6. MEETING QUALITY STANDARDS

The Learning Development Agreement held between HEE and each provider organisation requires that Library and Knowledge Services must meet nationally agreed quality standards set out in LQAF.

6.1 The impact of low staffing levels in library and knowledge services

Analysis shows that knowledge services with fewer qualified staff per workforce headcount are challenged to meet the 90% minimum compliance threshold defined

in LQAF. Insufficient capacity to deliver the full range of knowledge services required by the NHS, including the roles of clinical librarian and knowledge manager, is a key factor in failing to meet the minimum standard.

HEE is implementing a new Quality and Improvement Outcomes Framework for library and knowledge services from April 2020. Replacing LQAF, the new framework emphasises the importance of improving outcomes to meet the needs of a modern health service.

7. MAKING A POSITIVE IMPACT

The #AMillionDecisions advocacy campaign has given local health libraries a voice through which to promote their positive impact. Correlating case studies submitted to our Impact databank from those services with high LQAF scores, we looked at the staff ratios within which these services are operating. Examples are given in Appendix 2. These case studies report on how library and knowledge services make a positive impact on:

- **Improving patient care:** Evidence supplied led to a low-cost cure for unrelenting chest symptoms and has changed international practice.
- **Cost effectiveness:** The clinical librarian provided input essential to achieve £1.9 million in savings
- **Releasing time:** Evidence supplied lead to updates to midwifery policies and guidelines and released 302.5 hours of the midwife's time, equivalent to a saving of £12,397.
- **Improving productivity:** Identifying interventions to deliver health benefits and contribute to quality and efficiency savings for system-wide transformation.
- **Knowledge management:** using a KM tool the Head of Library Services and KM helped a Medical Division Board introduce a robust approach for developing clinical guidelines.

The staffing levels at the services which report the case studies above range between 1:614 and 1:932 qualified librarians/knowledge specialists per WTE healthcare staff.

7.1. Service reach

As clinical librarian roles become established the challenge is one of capacity and of reach. Where trusts invest in clinical librarian posts these are 'rationed', able to work with but a handful of designated teams. This is inequitable and there is an implicit risk to high quality patient care and safety. Meanwhile, few organisations have yet to realise the benefits of a dedicated knowledge management (KM) function.

Of course, health library and knowledge services with less capacity also make a positive impact on patient care through their daily work. To illustrate, at Buckinghamshire Healthcare NHS Trust, which operates at around the average staff ratio of 1:1,704, the clinical librarian provided evidence on patient safety which

informed a decision to upskill Healthcare Assistant Roles. In the context of difficulties in recruiting to band 5 posts this contributed to a cost-saving of £100,000.

8. BUILDING THE SPECIALIST WORKFORCE REQUIRED

HEE has an active workforce development work-stream for this specialised workforce. Tailored continuing professional development focuses on up-skilling today's library workforce in mobilising evidence and knowledge. To build the talent pipeline, the national team meets regularly with HEIs that offer courses in knowledge management and library science. HEE has taken a lead role in shaping the new health librarianship module within the Library and Information management Masters at Manchester Metropolitan. The team is in discussion with other education providers. The team also encourages a research perspective on these emerging roles.

9. DISCUSSION

HEE's analysis demonstrates that library and knowledge services with better staff ratios are more able to work proactively with a wider range of healthcare teams to enable evidence-based decision-making impacting on treatment options and the quality of patient care as well as impacting on productivity gains and cost improvement and the spread of innovation. The analysis has decisively demonstrated the relevance of staff ratios:

- knowledge services with fewer qualified staff per workforce headcount are challenged to meet the 90% minimum compliance threshold defined in LQAF
- where there is greater capacity than the current average staffing ratio of 1 qualified librarian or knowledge specialist per 1,730 WTE healthcare workforce, we see greater compliance with the LQAF standards and greater reporting of positive impacts on healthcare

The data shows that NHS is not yet positioned to optimise the emerging roles of embedded librarians, knowledge specialists and knowledge managers within the skill-mix of multidisciplinary clinical and managerial teams. The very best staffed NHS library and knowledge services lack capacity to reach all the teams whose patients and staff would benefit from their contribution. There is insufficient capacity to incorporate these roles within teams to inform evidence-based improvement in care, the spread of innovation, improved productivity and cost savings. The introduction of a recommended staff ratio is a key action by HEE to enable individual organisations to identify and address that risk.

10. POLICY RECOMMENDATIONS

These recommendations were approved by the Knowledge for Healthcare Board on 9 September 2019 and by the Health Education Executive on 5th November: -

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REFERENCES

1. NHS Library and Knowledge Services in England Policy, HEE, October 2016
<https://www.hee.nhs.uk/sites/default/files/documents/NHS%20Library%20and%20Knowledge%20Services%20in%20England%20Policy.pdf>
2. Knowledge for Healthcare: a development framework for NHS Library and knowledge services, December 2014
https://kfh.libraryservices.nhs.uk/wp-content/uploads/2018/03/Knowledge_for_healthcare_a_development_framework_2014.pdf
3. Source: HEE (2019) *LKS statistical return for NHS LKS staffing in England: 2019-20* [Unpublished]
4. Library and Knowledge Services in England Annual Statistical returns, 2014 – 2019
5. See <https://www.cqc.org.uk/provider/RKB/services>
6. Sadera, G. et al The Librarian as knowledge mobilise in critical care: Summary. Wirral University Teaching Hospital NHS Foundation Trust, Aug 2019.
7. Preparing the healthcare workforce to deliver the digital future: an independent report on behalf of the Secretary of State for Health and Social Care, HEE February 2019 <https://topol.hee.nhs.uk/wp-content/uploads/HEE-Topol-Review-2019.pdf>

APPENDIX 1. Regional variations in staff ratio

Region	WTE LKS qualified posts from the 2018 stats return	WTE NHS staff at December 2018	Ratio of qualified LKS staff to NHS staff - WTE
London/KSS	224.42	264,819	1:1,180
Midlands & East	142.56	299,522	1:2,101
North	154.63	348,694	1:2,255
South	104.73	169,942	1:1,622
TOTAL	626.34	1,082,977	1:1,729

APPENDIX 2. Illustrating the impact of library and knowledge services

Case study 1: Improving patient care

Evidence supplied by the knowledge specialist at Epsom and St Helier NHS Trust led to a trial of high-dose vitamin D for a patient with unrelenting chest systems which cured symptoms of Reactive Airways Dysfunction Syndrome.

“The patient symptoms resolved within three months once blood vitamin D levels rose.” Dr V Varney, Consultant Physician

The success of this innovative low-cost treatment led to a cure for unrelenting chest symptoms and has changed international practice.

The ratio of qualified librarians to healthcare staff at Epsom and St Helier is 1:803.

Case study 2: Cost effectiveness

Serving on the Product Selection Committee at Brighton and Sussex University Hospitals NHS Trust, the clinical librarian provided input essential to achieve £1.9 million in savings

“Having this information available alters our opinions, confirms ideas and influences our decision-making. It also helps us to engage with staff more effectively and makes change management easier. I would recommend that all change management committees consider including a librarian in their meetings”. Deb Bolton, Clinical Procurement Manager

The ratio of qualified librarians to healthcare staff at Brighton and Sussex is 1:614

Case study 3: Releasing time

Working across the maternity and governance teams, the clinical librarian at George Eliot Hospital NHS Trust efficiently delivered a comprehensive body of evidence leading to 55 updates to their former midwifery policies and guidelines. This released 302.5 hours of the midwife’s time, equivalent to a saving of £12,397.

“The librarian has saved me time... they are able to find evidence where I think there is none to be found“. Gaynor Armstrong, Governance Lead
Midwife

The ratio of qualified librarians to healthcare staff at George Eliot is 1:720.

Case study 4: Improving productivity

The knowledge specialist at Lancashire Teaching Hospitals NHS FT summarised evidence on 11 key topics to identify interventions to deliver health benefits and contribute to quality and efficiency savings for system-wide transformation.

“I was impressed with the quality of the work ..., particularly in terms of the timescales and it made our job a lot easier. It made us able to focus much more on the other elements of the jigsaw. If we hadn’t had the library service, I don’t think we could have done what was done within that timescale.” Kate Hardman, Intelligence, Quality and Performance Manager, Lancashire Public Health

The ratio of qualified librarians to healthcare staff at Lancashire is 1:932

Case study 5: Knowledge management

The Head of Library Services and Knowledge Management at Surrey and Sussex Healthcare NHS Trust completed HEE’s Utilising Evidence and Organisation Knowledge Self-assessment tool with the Medical Division Board. The experience of completing the self-assessment made the Chief of Medicine more aware of the potential of working with the knowledge services team and particularly in relation to using their Knowledge management skills. This has helped the team introduce a more robust approach to developing clinical guidelines at the Trust.

“Completing the self-assessment tool has changed the way we will work and how we will use evidence and knowledge. The library team should be our knowledge stewards in the same way as microbiology are the antibiotic stewards for the Trust.” Ben Mearns Chief of Medicine Surrey and Sussex Healthcare

The ratio of qualified librarians to healthcare staff at Surrey and Sussex Healthcare is 1:942