

Embedded Knowledge and Library Specialist Roles within Primary Care Training Hubs: Evaluation

26 July 2024, Version 1.2

Part 1: Introduction

1.1 Background and Context

According to [Next Steps for the 5 Year Forward View](#), 93% patient consultations take place in primary care. Despite this, NHS Knowledge and Library Services have traditionally been aligned to secondary care and provision for the primary care and Integrated Care Board (ICB) workforce has been patchy. To ensure this previously underserved workforce benefits from dedicated knowledge services, a proof-of-concept vanguard was established at 15 pilot test-sites in England, fully funded by Health Education England (now NHS England) and National Knowledge and Library Services. Funding was provided for two years to allow for a qualified library and knowledge specialist at Agenda for Change Band 6 to be recruited plus a modest allowance for the designated NHS Knowledge and Library Service managing the embedded post to provide wrap-around support and services such as managing digital knowledge resources and supplying articles.

The goal of the vanguard was two-fold:

1. To ensure this previously under-served workforce benefits from dedicated knowledge specialists
2. To demonstrate the benefits to inform decision-making for a business case to provide sustainable funding to establish an embedded knowledge specialist role in each of the 42 Primary Care Training Hubs in England

The role of an embedded primary care librarian and knowledge specialist is to identify priorities and deliver a tailored and targeted knowledge service to primary care organisations, primary care staff and learners across a geographical boundary and in some instances, to staff working within ICBs.

Key aspects of the role involve:

- Supporting multi-professional education, training and development for primary and integrated care staff groups and learners on placement, across a particular primary care area
- Undertaking evidence literature searches to underpin policies, procedures and clinical care and inform service and workforce transformation and role re-design
- Providing summarised and synthesised evidence where required
- Promoting the opportunity through the local knowledge service for staff to set up personalised alerts to keep up to date
- Connecting staff and learners to nationally procured digital knowledge resources such as eBooks, eJournals, guidelines, the clinical decision support tool BMJ Best Practice and wellbeing resources
- Facilitating knowledge sharing and lessons learned workshops to inform service improvement and innovation.
- Offering information and health literacy skills training, underpinned by digital skills
- Gathering activity and impact data

Alongside the proof-of-concept vanguard, the national Knowledge and Library Services Team made the case to fund and sustain these services as an integral part of the infrastructure of Training Hubs by recommending that knowledge and library service provision was included in the future training hub specification. Although this was not possible, the ambition to provide more equitable access to NHS knowledge and library services for all in the NHS, including those working within primary care and ICB teams, remains. Seeking ways to fund, as a minimum, one embedded library and knowledge specialist to work with primary care staff and learners in each of the 42 integrated care systems across England remains the ambition.

1.2 Location of pilot sites and confirmed continuation of roles

Following successful bids, the pilot sites were selected, and knowledge specialists recruited, starting in role between September 2021 and April 2022.

Location	Employing organisation	Continuation and notes
Bedfordshire, Luton and Milton Keynes	Milton Keynes University Hospital NHS Foundation Trust	Yes
Buckinghamshire	Buckinghamshire Healthcare NHS Trust	Yes, but significantly reduced service to 4 hours per week for 12 months. Using alternative source of funding to keep minimal service ticking over whilst seeking more sustainable funding from ICB.
Joined Up Care Derbyshire	University Hospitals of Derby and Burton NHS Foundation Trust	Yes
Leeds	Leeds Community Healthcare NHS Trust	No: Business case offer to extend service to entirety of West Yorkshire Primary Care staff and learners not accepted but negotiations continue
Leicester, Leicestershire and Rutland	University Hospitals of Leicester NHS Foundation Trust	Yes 0.5 WTE for a further year
North Central London	Whittington Health NHS Trust	Yes: Funding to continue role at 4 days a week for a further 12 months ending October 2024
North East London	NELFT NHS Foundation Trust	No. Ongoing conversations with ICB staff especially relating to health inequalities.

Northeast and North Cumbria	North Cumbria Integrated Care NHS Foundation Trust	No: Awaiting evaluation to inform a future business case. Limited offer continuing without an embedded specialist or additional funding.
Nottinghamshire Alliance	Sherwood Forest Hospitals NHS Foundation Trust	Yes
Oxfordshire	Oxford Health NHS Trust	Yes: Using underspend from original Vanguard funding due to delay in recruiting to role
Somerset	Somerset NHS Foundation Trust	No: Business case supported by Training Hub leads and Primary Care Clinical Directors but there is currently no clear business case proposal process in the ICB, and Primary Care Boards were unable to fund individually. Discussions are continuing with basic KLS offer in the meantime (does not include value-add services such as evidence searching or training).
South West London	Epsom and St Helier University Hospitals NHS Trust	Yes: Reduced and altered offer with a focus on delivering training into the ICS
South Yorkshire	The Rotherham NHS Foundation Trust	No: Business case accepted but then pulled as regional funding to primary care withdrawn from the centre.
Surrey	Epsom and St Helier University Hospitals NHS Trust	Yes: Business Case approved. Service Level Agreement signed for two years (1 September 2023 - 31 August 2025). First year payment received. Part time, initially 3 days a week from September 2023 to January 2024. From February 2024 onwards, part-time 1 to 2 days a week. The change in the number of days is due to late receipt of funds.
Sussex	University Hospitals Sussex NHS Foundation Trust	No: Reverted to a basic service.

The embedded knowledge specialists were aligned with 15 Primary Care Training Hubs and were employed by existing local Trust knowledge and library services. A re-structure in April 2022 brought the Oxfordshire and Buckinghamshire Hubs together to form the Berkshire, Oxfordshire and Buckinghamshire Training Hub but for the purpose of this pilot the knowledge specialists continued to support the two separate areas of Buckinghamshire and Oxfordshire.

An additional bid was accepted to place a knowledge specialist in the training hub at Mid and South Essex however difficulties with recruitment prevented this post from being taken up. However, in 2023, at the end of the Vanguard Mid and South Essex identified local funding and successfully recruited into the role for 1 year.

Initially pilots were funded for 1 year and then central funding was provided to extend for a further year. At the end of the Vanguard, Training Hubs were encouraged to work with their local knowledge and library service to develop local business cases to sustain the roles beyond the end of the pilot. Nine of the services have succeeded in securing a degree of local funding to continue in some form. The remaining six have stepped down the embedded service and are no longer actively promoting knowledge resources or services to primary care staff and learners or ICB staff. Access to the nationally procured collection of digital knowledge resources remains in place for all.

Learning from the pilots has been captured and shared with other NHS knowledge and library services planning to make provision for primary care and ICBs.

Part 2: Evaluation Methods

2.1 Evaluation Purpose

This evaluation is designed to answer the following questions:

How do embedded librarian knowledge specialist roles improve access to, and use of, research evidence and knowledge for all staff and learners working in primary care and ICBs?

How do these roles contribute to saving the time of healthcare staff, informing decisions and improving patient outcomes?

What is the value that an embedded librarian knowledge specialist role brings to primary care and ICBs?

What are the benefits and costs of continuing and expanding embedded knowledge specialist roles within Primary Care Training Hubs across the 42 integrated care systems in England?

2.2 Evaluation scope

The evaluation covers the two-year Embedded Knowledge Specialists Vanguard which started in September 2021 and ended officially in September 2023. It does not cover services provided to primary care or ICBs outside of the 15 Vanguard sites. During the course of the Vanguard, ICBs in England took up statutory duties in 2022 and the offer at some of the Vanguard sites extended to include provision of evidence and knowledge services to ICB staff. Whilst this evaluation focuses mainly upon the impact of embedded knowledge specialist roles on primary care the benefits and value of these roles can also be applied to ICBs.

2.3 Evaluation design

The evaluation is based upon the results of mixed methods research, some of which is self-reported by the Vanguard teams and some of which is collected by the national knowledge and library services team.

How do embedded librarian knowledge specialist roles improve access to, and use of, research evidence and knowledge for all staff and learners working in primary care and ICBs?		
How do these roles contribute to saving the time of healthcare staff, informing decisions and improving patient outcomes?		
Information required	Information source	Method
Evidence review	Reviewing what has already been published about access	Literature review and summary

	to evidence and knowledge within primary care in England	
Activity data	Quarterly data returns: Number and type of alerting services Number of literature or evidence search services, broken down by purpose and time spent Number of information resource related queries Number of user information skills sessions delivered Number of people receiving information skills training Number of copies of articles or e-book chapter downloads supplied by library staff	Review of self-reported monitoring data by national team
Impact narratives	Completion of impact survey Collection of impact case studies	Completion by users of the service compiled by knowledge specialists and their managers
What is the value an embedded librarian knowledge specialist role brings to primary care and ICBs? (This includes the value contribution to key objectives for training hubs, ICB strategic objectives, contribution to the NHS quadruple aim and improved value for money from nationally procured e-resources).		
Usage of digital resources	Open ATHENS account data Hub data BMJ Best Practice data	Review of monitoring data (national datasets)
Impact narratives	Completion of impact survey Collection of impact case studies	Completion by users of the service compiled by knowledge specialists and their managers
Activity narrative	Narrative from quarterly returns	Narrative in quarterly returns summarising activity from knowledge specialists and their managers
What are the benefits and costs of continuing and expanding embedded knowledge specialist roles within Primary Care Training Hubs across the 42 integrated care systems in England?		
Value for money	Cost consequence analysis / value proposition	Applying Value Proposition: Gift of Time research
Mapping benefits to priorities	Benefits to primary care training hub priorities and meeting quadruple aim	Applying impact narrative to priorities

2.4 Evaluation stakeholders

STAKEHOLDER	INTEREST/STAKE	INVOLVEMENT/PARTICIPATION
National Knowledge and Library Services Team	Primary	Project initiation, funder. Ongoing monitoring, evaluation and reporting. Advocating for sustainable funding to expand these roles.

Regional Primary Care Training Hub Leads	Primary	Beneficiary, sponsor.
Primary Care Training Hub National Team	Primary & Secondary	Support role, communications with training hubs, assist with data gathering
Embedded Knowledge Specialists	Primary	Service delivery, collect data, impact case studies, contribute views, adapt services based on learning
NHS Knowledge and Library Service Managers in England	Primary	Managing service delivery including resource management. Oversee impact and activity data collection, contribute views. Need data to make case to continue or to initiate
Primary Care staff and learners	Primary	Beneficiaries, contribute to surveys, interviews, focus groups
Primary Care Network Staff, particularly Clinical Directors	Primary & Secondary	Beneficiaries, contribute to surveys, interviews, focus groups. Potential long term beneficiary and project owner as moves to business as usual
Integrated Care Board members	Primary & Secondary	Direct beneficiaries and future owners as move to business as usual, involved in ongoing decisions about sustainable continuation

Part 3: Findings

3.1 How do embedded librarian knowledge specialist roles improve access to, and use of, research evidence and knowledge for all staff and learners working in primary care?

Mobilising evidence and knowledge activity

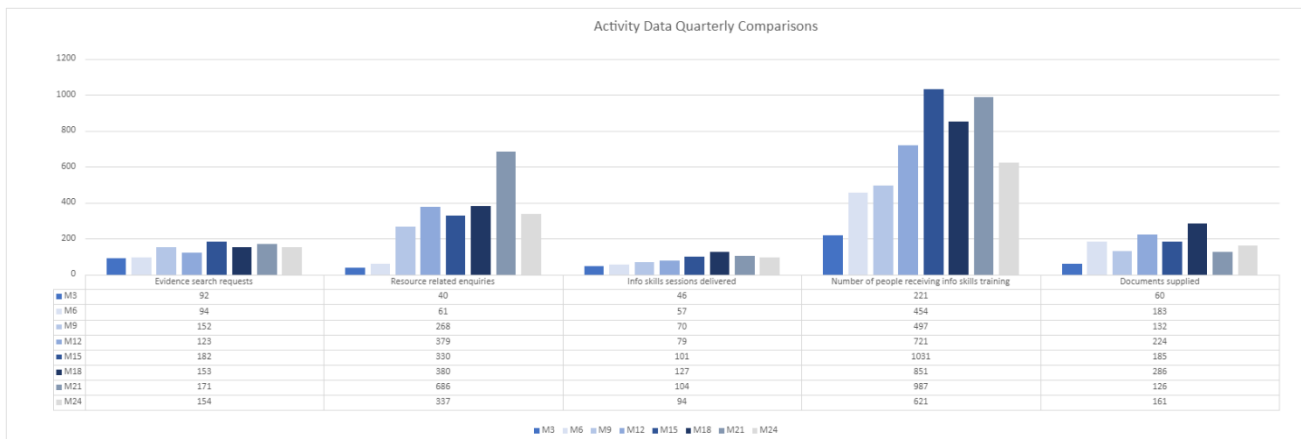
September 2021 - September 2023



How can a primary care library and knowledge specialist help you?

- Evidence searches and summaries
- Quality improvement support
- Updates on latest research and best practice
- Bid and project support
- Bite-sized information skills training
- Free access to journals, reports and e-books
- Sharing knowledge and insights
- Helping to make the most of clinical decision support tools

The embedded librarian knowledge specialist roles are effective in improving access to, and use of, research evidence and knowledge for all staff working within primary care and ICBs.



The self-reported activity data shows a peak in activity at the halfway point of this pilot which demonstrates the time taken to embed these new services into practice. Tailing-off of activity towards the end of the pilot correlates to news being shared of no further centralised funding to sustain these roles. Some of the roles became vacant, with activity covered by other members of the knowledge and library services team with less proactive promotion than previously. At this point focus was also taken away from direct activity as development of local business cases to make the case to fund beyond the end of the pilot were being created.

See [Appendix 1](#) for examples of the range of activities undertaken

The embedded librarian knowledge specialists have interacted with a wide-range of primary care roles and professions including apprentices; trainees; specialty groups such as advanced clinical practitioners, nurses, allied health professionals. People in new associate roles. Roles in the wider ICS - pharmacists, paramedics, public health specialists. Practice Managers, GPs, those leading quality improvement, digital transformation. Others from Additional Roles Reimbursement Scheme (ARRS) such as social prescribers and link workers. They have assisted project and programme managers with trailblazer service improvements plus PCN Clinical Directors, Nurse Leads, Social prescribing leads and Training Hub staff and in some cases worked with ICB teams.

3.2 What does the published literature say?

A literature search was requested from the NHS England Workforce, Training and Education Knowledge Management Service to determine any published research about the benefits or value of having an embedded knowledge specialist in place to meet the information needs of primary care staff and to consider how effectively primary care staff find and use research evidence and knowledge.

There was little recent published research on either topic. However, from the evidence retrieved there was an indication that librarians and knowledge specialists providing services to primary care staff do deliver benefits. Knowledge and library professionals are pivotal for facilitating personal and professional growth, encouraging the use of evidence based digital resources and bringing knowledge to the point of care. Knowledge and library specialists also help to overcome the barriers to practising evidence-based healthcare experienced by primary care staff. such as resource limitations and access issues, skills gaps and in particular managing time constraints.

The data gathered from this pilot updates and confirmed findings from a rapid literature review conducted in 2006 which identified “a small body of evidence demonstrating the beneficial impact of library and information services on direct patient care”¹

¹ Lacey Bryant,S and Gray A(2006) Demonstrating the positive impact of information support on patient care in primary care: a rapid literature review. Health Information and Libraries Journal <https://doi.org/10.1111/j.1471-1842.2006.00652.x>



Evidence Librarians informing decision-making in primary care




Launching a Leg Club

East Guildford PCN Manager asked the Evidence Librarian to identify and summarise relevant evidence on the Leg Club model. The evidence was used to support a business case for funding from the Better Care Fund and to inform the delivery of a Leg Club in East Guildford.

What was the impact? The Leg Club model will save the PCN a huge amount of money in clinical costs. It will improve social isolation and loneliness in the cohort of people experiencing lower limb wounds. There is also evidence to show the healing rate is quicker and more sustainable when patients attend a leg club.

*Kayleigh Moyse
East Guildford PCN manager*



Case Study: Buckinghamshire 4th May 2023

Is it appropriate to prescribe 30mg fluoxetine to a 12-year-old patient with OCD?

Reason for enquiry:

A senior practice pharmacist in Buckinghamshire was asked by a psychiatrist to prescribe 30mg fluoxetine for a 12-year-old patient with OCD. Despite reassurances from the psychiatrist, she was concerned that this was an extremely high dose for a child. The pharmacist contacted the Buckinghamshire Primary Care Knowledge Specialist to see what the evidence base was for this.

What did the knowledge and library specialist do?

The Primary Care Knowledge Specialist carried out an extensive search on this topic. The search was conducted on many databases and websites to identify relevant evidence. The results – with a summary - were sent to the requestor.

Impact:

“The search results were discussed with the named GP for this patient. The results gave us information needed to make a prescribing decision for our patient. One of the pillars of good prescribing is evidence- based medication. In this scenario the knowledge specialist was able to provide the time-consuming literature search and she could not find any strong evidence to support the private consultants advice to prescribe 30mg of fluoxetine to a 12-year patient .”

“We were able to confidently reply to the private consultant with refusal to continue prescribing and have the difficult conversation with the parents of our patient. I believe they felt reassured that we had taken the trouble to gather evidence and accepted our decision.”

The activity data and qualitative evidence demonstrate that embedded librarian knowledge specialist roles have improved access to, and use of, research evidence and knowledge for staff and learners working in primary care at the pilot sites.

3.3 How do these roles contribute to saving the time of healthcare staff, informing decisions and improving patient outcomes?

Evidence searches and summaries

September 2021 - September 2023



Equivalent of

897

working days saved by knowledge specialists undertaking searches



If we assume each evidence search would on average have taken a clinician or non-librarian at least 6 hours to complete, the project to date has saved: 6,726 hours or 897 working days of clinicians time.

Search summaries have been prepared to provide evidence to inform a wide range of topics:

Direct patient care such as oral health in children and when to make a safeguarding referral or Prediabetes in patients whose first language is not English

Management decision making such as reviewing what QI initiatives are taking place nationally in primary care or considering data on frequent attenders in Primary care

Patient health and wellbeing such as an overview of adult ADHD or role of yoga to improve wellbeing

Research and professional development Intersectionality framework research in healthcare or differential attainment/equality standards and career progression

See [Appendix 3](#) for a further list of search request topics.

Comprehensive research and invaluable service. It lays the foundation for the need for a Menopause Service. **PCN Operations Manager, Surrey**

A really fast response and much broader than I had hoped for, as I was also invited to training events to help me be more independent in my future research. **GP, Surrey**

The search results provided evidence that lymphoedema provision is required in SWL and highlighted the long-term complications, which impact on patients QoL and requirements for health and care services. This evidence, together with a gap analysis of service provision across SWL identifies that patients have a variable service and changes are required to bring lymphoedema provision into the community which will result in improved patient care and outcomes and financial savings. **SWL ICS**

Case Study: Somerset 2023: Underpinning a programme of change: an evidence base for hypertension

Reason for enquiry:

During a conversation promoting the primary care knowledge specialist service to the Associate Directory of Primary Care within the Somerset ICB a request was made for an evidence search about hypertension as this was a top priority for system population health management.

What did the knowledge and library specialist do?

The Primary Care Knowledge Specialist carried out an extensive search on this topic. The search was conducted on many databases and websites to identify relevant evidence and the results synthesised and summarised.

Impact:

The summary of the evidence helped to accelerate the delivery programme, bringing forward the implementation date for the whole intervention which is highly likely to save lives.

“It is likely that if the knowledge specialist’s expertise had not been available, we would have bought in external expertise, e.g. from Imperial Health Partners. The programme would not have been underpinned by sound evidence, or it would have been sourced at higher cost. The time of senior managers would have been consumed in performing literature searches they were not highly competent to undertake, and therefore would likely have been sub-optimal.”

Michael Bainbridge – Associate Director of Primary Care (Strategy).

3.4 Proactive value-added services

Embedded knowledge specialists have **attended a wide range of forums and meetings** to provide proactive evidence search summaries to inform the discussions. These include attendance at clinical governance meetings, Primary Care Network Boards, practice manager meetings, clinical design authority meetings, training hub operational groups and taking part in specific project and programme groups looking at wellbeing, leadership and new roles. See [Appendix 2](#) for more details on the range of individuals interacting with the service and [Appendix 4](#) for more detail on quantity of services delivered.

Several forms of **alerting services** have been supplied to staff working in primary care including subject or topic bulletins, health news, electronic journal tables of contents services and horizon scanning. Further research is required to assess the reach, value and impact of these services.

Where knowledge specialists have been able to build relationships with those working or learning in primary care they have been invited to events and meetings and have been able to tailor the service offer to groups. This has led to increased use of services, evidence and knowledge. This has been more effective where training hub colleagues have made helpful introductions and assisted with promotion of the service.

We have been impressed with the support from the Knowledge Library Services Specialist. They have supported our project research, providing accurate, relevant information & resources. Their expertise and input has quickly become a valuable part of our work. **Wandsworth Training Hub.**

Case Study: Nottingham and Nottinghamshire 2023

Providing the evidence to underpin quality improvement projects and delivering training to enable project results to be more widely shared

Reason for enquiry:

The Primary Care Evidence Support Librarian was invited to meet with mid-career GP Fellows on the Phoenix Programme. Following this meeting the GP Fellows requested evidence searches to underpin their service improvement projects with evidence from research.

What did the knowledge and library specialist do?

The Primary Care Knowledge Specialist carried out extensive searches on various quality improvement topics such as *what is the impact of green prescribing initiatives*, *how can social prescribing address obesity* and *is there a link between poorly controlled type 2 diabetes and deprivation*. The librarian was then asked to provide teaching on academic poster design and writing for publication to help the GP Fellows share their research and quality improvement findings.

Impact:

Involving the librarian in this work has improved the rigour of the Phoenix Programme quality improvement projects and has led to upskilling mid-career GP Fellows to publish their work.

3.4.1 Information skills training

2924 people working in primary care have received some form of information skills related training from an embedded knowledge specialist at a vanguard site. Of the 353 sessions delivered many included general introduction sessions to knowledge and library resources and services; study skill sessions for groups such as apprentices; health literacy awareness sessions; basic digital literacy for patients and carers; lunch and learn and mini sessions about how to make best use of resources such as the Knowledge and Library Hub or BMJ Best Practice, introductory sessions to discuss the use of artificial intelligence and machine learning within the health service and training on research skills including critical appraisal, routes to publication and support to produce academic posters.

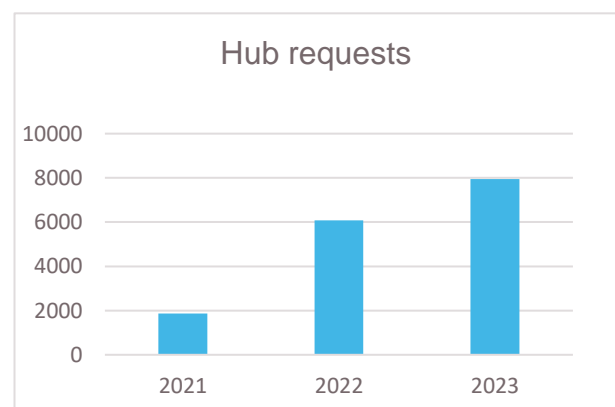
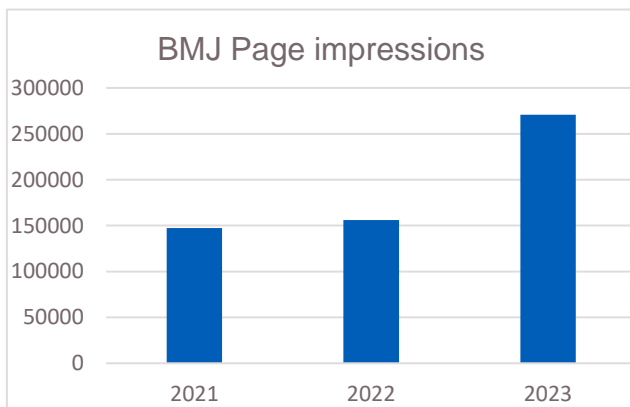
Embedded librarian knowledge specialist roles give the 'gift of time' to primary care staff releasing them to have more time to spend on patient-facing activities whilst being assured that they are basing their decisions on the best available evidence from research and examples of shared good practice. This leads to improved patient experience and outcomes. The latest research demonstrates that where library and knowledge specialists provide evidence searching and summarising services this leads to a cost effectiveness ratio of 1:3.85¹, this is based on time saved and does not factor in the other multiple benefits of this service.

¹ Edwards et al. Evidence Searches Undertaken by Knowledge and Library Specialists Save the Time of Health Care Professionals and Produce an Economic Benefit to the NHS in England
<https://www.tandfonline.com/doi/full/10.1080/15323269.2022.2124772>

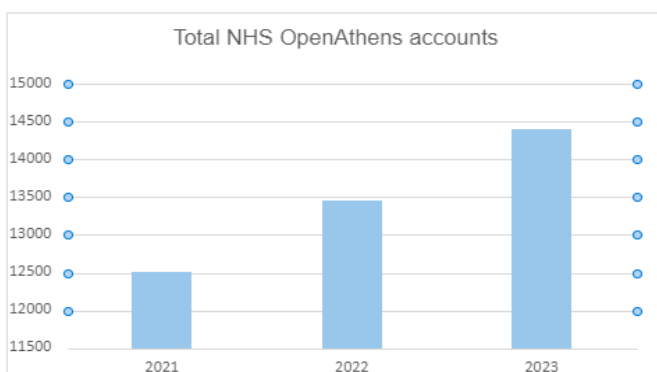
3.5 What is the value that an embedded librarian knowledge specialist role brings to primary care and ICBs?

3.5.1 Value of digital knowledge resources

All those providing services and care to NHS patients and clients, and those on placement in health and care settings, benefit from the value of centrally purchased free-at-the-point-of-use digital knowledge resources and supporting infrastructure. This includes access to the clinical decision support tool BMJ Best Practice, evidence-based tools such as the Cochrane Library, Royal Marsden Manual of Clinical and Cancer Nursing Procedures, The Maudsley Prescribing Guidelines and NICE Guidelines as well as electronic books, journals and bibliographic databases. All can be accessed when and where needed using an NHS Open Athens verified account. This guarantees fingertip access to the latest reliable published evidence for all anywhere, anytime and is made easier by being easily discoverable via the NHS Knowledge and Library Hub. This nationally provided collection provides the resources to keep those working in any part of the NHS informed and saves them time making access to the evidence knowledge base easy.

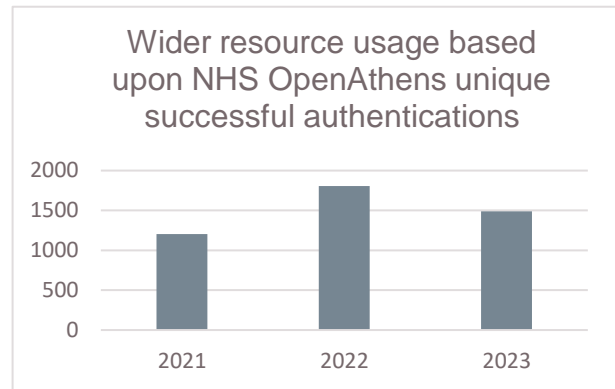


There has been an increase in use of key resources such as the Knowledge and Library Hub and BMJ Best Practice across the whole of primary care and ICBs since the Vanguard started in 2021. This increase can be attributed to promotion and demonstration of these tools by the primary care library and knowledge specialists and in particular the work they have done to encourage Primary Care Networks to make these valuable tools available on practice desktops.



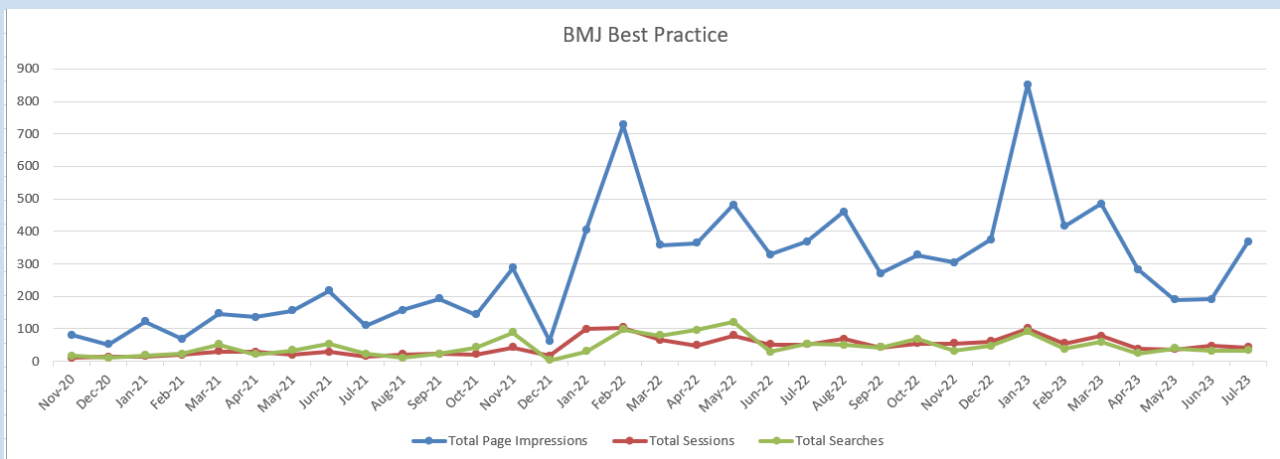
Over the period there has also been a steady increase in the total number of NHS Open Athens accounts held by staff and learners based in primary care and ICBs.

Disappointingly this increase in account holders has not been mirrored in wider knowledge resource usage via the NHS Open Athens authentication route. There was some increase during 2022 and usage is higher than baseline in 2021. This dip could be due to the use of alternative access arrangements which by-pass NHS Open Athens authentication.



Case Study: Leeds 2023 Increasing use of high-quality evidence by promoting BMJ Best Practice to primary care staff

The Primary Care Knowledge Specialist in Leeds actively promoted nationally provided digital knowledge resources, and in particular BMJ Best Practice to staff working in primary care and the ICB. This involved preparing bite-sized training videos, word-of-mouth promotion and sharing information about resources at various events. By monitoring usage data any drop in use could be counteracted by further promotion



Data shows spikes in use that correlates to the knowledge specialist becoming established in role in February 2022 and then sustaining promotion leading to ongoing high usage of BMJ Best Practice. Comparing this usage data with neighbouring Bradford, where there is no embedded primary care knowledge specialist, led to the Leeds Library Manager commenting “The six-month total usage figures in Bradford up to September 2023 for searches and page impressions are less than the monthly average usage figures (based on 20 months of data) for Leeds. A clear demonstration of how having a proactive library service makes a demonstrable, and significant, difference in the uptake of evidence-based resources.” “

The Vanguard was established before ICBs became mandatory in April 2022. As a result, some of our pilots offered services to a wider geographical spread of primary care than others. For example, South West London originally focused just upon Wandsworth and West Yorkshire was solely Leeds-based. This led to challenges when comparing resource usage data as infrastructure was not fully aligned to the new and emerging structures.

The study has demonstrated that providing access to digital knowledge resources is not enough to encourage the use of evidence from research into practice. These resources need to be promoted and demonstrated to primary care staff so they can make best use of nationally provided resources.

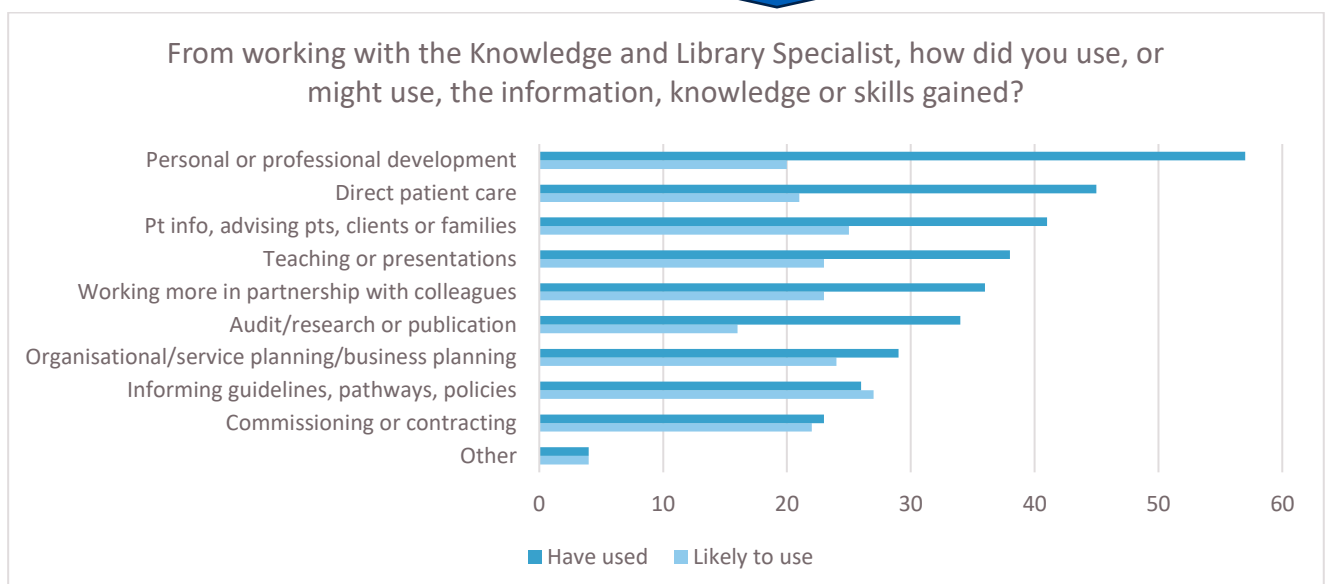
Overall, there has been an increase in use of key resources such as BMJ Best Practice and access to the Knowledge and Library Hub. This is due to the work of embedded knowledge specialists demonstrating the value of these resources to those working in primary care and promoting use. This has contributed to an excellent return on investment and supports research conducted in 2009 that showed that “outreach librarians have proved to be an efficient model for promoting and driving up resources usage”¹

1. Bell, K et al 2009. The impact of library services in primary care trusts in NHS North West England: a large-scale retrospective quantitative study of online resource usage in relation to types of services. Health Information and Libraries Journal <https://doi.org/10.1111/j.1471-1842.2008.00789.x>

3.5.2 Value of services provided by library and knowledge specialists

Nine training hubs promoted a generic impact survey to gauge the impact of the primary care knowledge specialist service. 92 responses were received. Based on a critical incident approach to gathering impact, respondents were asked to consider their use of a particular knowledge and library service and how it has made an impact. Most responses (66%) related to receiving a literature evidence search although the impact of other services such as access to digital knowledge resources, information skills training, receiving bulletins to stay up-to-date with the latest research, article requests, book loans and some bespoke services were also mentioned.

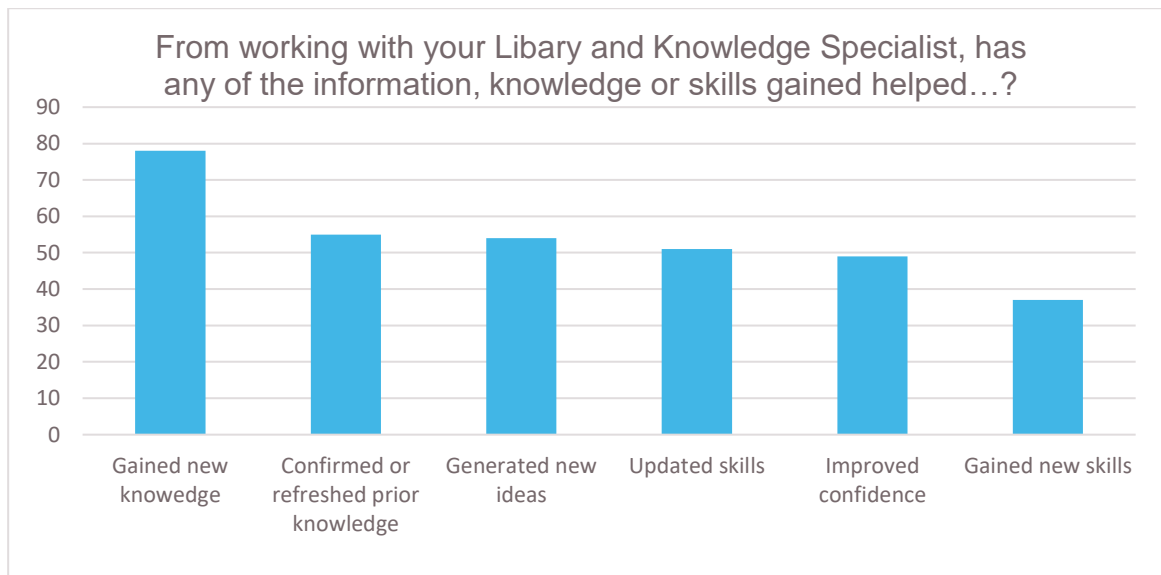
We have had bespoke support with public health intelligence and local data support



Our knowledge specialist kindly presented to new apprentices prior to them starting a foundation degree. This allowed them to understand the full services on offer. She has also helped me personally with referencing when I was writing a formal essay and to get access to online databases for evidence. She has also helped by researching for a newsletter for Nursing Associates which we can publish regularly. She also presented on a teams meeting and at a GPN forum on the science of learning which helped all clinical educators to either refresh or learn new teaching skills

Work by the librarian knowledge specialists has led to the information, knowledge and skills being used to inform personal and professional development, direct patient care and advice shared with patients, clients or families.

3.5.3 Positive impacts for individuals



From working with their librarian knowledge specialists, 78 respondents reported that the information, knowledge or skills gained helped them to gain new knowledge and 55 people felt that the information, knowledge or skills gained confirmed or refreshed their prior knowledge. In addition, interaction led to the generation of new ideas for 54 people. Other benefits for individuals included updating skills, gaining new knowledge and improving confidence.

3.5.4 Positive impacts upon service delivery



83% respondents considered that the interaction with the knowledge specialist and knowledge and library service had an immediate or probable future impact upon more informed decision making with 78% stating that interaction with the knowledge specialist had an immediate or probable future impact on improving the quality of patient care.

Impact Case Study

Evidence supplied helped a patient make an informed choice



A patient was concerned that continued use of their steroid inhaler would lead to further cataracts. The Primary Care Knowledge Specialist searched and compiled a digest on the topic “inhaled corticosteroids and incidence of cataracts”.

The information helped the patient to understand that the use of the steroid inhaler was safe.

The search saved 2 hours of clinical time and avoided the risk of a future hospital admission through stopping steroid inhaler treatment

Jennifer Low, Lead Primary Care Network Pharmacist working with the Primary Care Knowledge Specialist for Primary Care Staff in Buckinghamshire

“It helped the patient to make a decision. It helped us to support the patient to make a good decision. We put the information you sent to us on to the patient’s record so it would help any of the nurses or doctors when they do an asthma review, they will have that information to look back on”

“it just felt like such a relief that we had somebody to ask because we are so stretched in primary care at the moment. **Having a library service is really valuable because these queries can be really time consuming and it’s really stressful when you know that you should look into it but you don’t have the time...** The staff in primary care are at their limit and knowing there are people that can support them with these complex queries is great”

The vanguard has successfully demonstrated the multiple benefits that are realised when a qualified librarian knowledge specialist is employed to focus their work on meeting the evidence and knowledge needs of staff and learners within primary care settings. From the survey these roles have been shown to have a positive impact upon more informed decision making which in turn leads to the immediate and probable future impact of improved quality of patient care.

Many of the impact case studies collected during the vanguard demonstrate that the actions taken by the librarian knowledge specialists saved the time of staff working in primary care but also gave those staff confidence in following a particular course of action as supported by the published research evidence.

In several cases, this had a direct impact upon the quality of care provided to a particular patient and in others the information prepared by the knowledge specialists helped to realise efficiencies, saving both time and money. Other examples helped to shape organisational approaches to the delivery of care, informing a particular direction and accelerating progress by avoiding wasteful re-invention, by building upon the work of others.

3.6 What are the costs and benefits of continuing and expanding embedded knowledge specialist roles within Primary Care Training Hubs across the 42 integrated care systems in England?

Case Study: South Yorkshire, Summer 2023 Evaluation of the impact of the Additional Roles Reimbursement Scheme: Rotherham and Doncaster

Reason for enquiry: The Primary Care Knowledge Specialist was approached to help with research about the impact of the Additional Roles Reimbursement Scheme (AARS). This was to inform an evaluation to help the ICB to understand the value of the AARS workforce across South Yorkshire and make appropriate workforce interventions.

What did the knowledge and library specialist do? The Primary Care Knowledge Specialist carried out extensive searches across multiple information sources, synthesised this information and produced a usable, tailored summary about the impact of national ARRS roles. The Knowledge Specialist worked with the project lead to compile the report, bringing the national picture together with the local experience. They also helped the project lead to communicate the findings of the evaluation by creating a series of infographics to make it easier to share this research knowledge with others.

Impact: The outcomes from this research project have been used by the ICB to inform timely workforce planning and will also be used at a Place and role level to focus on effective interventions to recruit and retain ARRS staff, to improve primary care-based services, patient experience and patient outcomes.

Following this local work, the NIHR published a similar evidence summary about additional roles in primary care in December 2023. This took much longer to produce and did not have the local focus that the South Yorkshire research prepared by the local knowledge specialist contained.

3.6.1 Benefits mapped to Primary Care Training Hub Priorities

Workforce Planning	<ul style="list-style-type: none"> • Informed by latest research evidence and good practice summarised by knowledge specialists. • Keeping staff up to date with the latest thinking by sharing tailored horizon scans and bulletins.
Development of Educational Programmes	<ul style="list-style-type: none"> • Informing service improvement and innovation by facilitating knowledge sharing and lessons learned workshops. • Offering information and health literacy skills training, underpinned by digital skills.
Equality, Diversity and Inclusion	<ul style="list-style-type: none"> • Equitable access to knowledge and library services for all NHS staff and learners. • Access to specialist collections to promote awareness of ED&I. • Promoting awareness and understanding by facilitating knowledge sharing.
Learning Environments	<ul style="list-style-type: none"> • Connecting staff and learners to digital knowledge resources. • Providing support for all learner and staff groups to acquire study and research skills.
Capacity and Capability of Educators	<ul style="list-style-type: none"> • Connecting staff and learners to digital knowledge resources • Organising and facilitating knowledge sharing activities to assist with capacity and grow capability of educators. • Keeping educators up to date with latest research and best practice via tailored bulletins and horizon scanning.
Additional Roles Reimbursement Scheme	<ul style="list-style-type: none"> • Supporting multi-professional education, training and development for all primary and integrated care staff groups and learners on placement. • Keeping these staff informed of latest research evidence, best practice. • Helping these staff to effectively network and share know-how. • Contributing to staff recruitment and retention.
System Design and Development	<ul style="list-style-type: none"> • Informed by latest research evidence and good practice summarised by knowledge specialists • Sharing 'know how', good practice and avoiding unnecessary duplication by facilitating knowledge sharing activities

3.6.2 Benefits mapped to ICB aims and the NHS quadruple aim

NHS librarian knowledge specialists enable the use of evidence from research, one of the duties of the health service within the Health and Care Act 2022. They manage and mobilise organisational knowledge, good practice and staff know-how to strengthen decision-making by practitioners and teams, the Service at strategic and policy level and the performance of healthcare organisations. They underpin delivery of NHS aims and enable Integrated Care Boards to achieve their objectives:

Improve outcomes	<ul style="list-style-type: none"> • Improving decision support for improved patient outcomes and safety • Summarising evidence to inform diagnosis and treatment options • Contributing and facilitating a culture of continuous improvement • Driving learning health systems
Tackle inequalities	<ul style="list-style-type: none"> • Summarising research to inform policy, guidelines and practice • Enabling equitable access to knowledge and library services for all NHS staff and learners • Offering information and health literacy skills training, underpinned by digital upskilling.
Enhance productivity	<ul style="list-style-type: none"> • Contributing a return on investment of 1:3.85 through the Gift of Time; • Delivering more productive working practices by encouraging sharing and transfer of knowledge

	<ul style="list-style-type: none"> • Avoiding unnecessary duplication by enabling learning before, during and after
Support broader social and economic development	<ul style="list-style-type: none"> • Underpinning lifelong learning for all • Facilitating research and the spread of innovation. • Providing evidence and data to address health inequalities. • Upskilling healthcare staff to facilitate informed healthcare decisions

3.6.3 Value

Based on the Value Proposition [Gift of Time](#) research, knowledge services give the ‘Gift of Time’, delivering value for money and making a positive return on investment. Taking the ‘heavy lifting’ out of getting evidence into practice to improve the quality of care, they **deliver a cost benefit ratio of 1:2.4 based on savings of clinicians’ time alone**. This does not include the wider value of improved access to higher quality evidence and the resulting impact on patient outcomes, costs, productivity and the workforce.

Further research has shown that this cost benefit ratio increases to **1:3.85** when the knowledge specialist synthesises and summarises research evidence. Therefore, the investment made by each Training Hub employing an embedded knowledge specialist can be expected to generate **a net economic benefit of at least £72K per annum** (financial value of economic benefits rather than NHS budgetary impact).

3.6.4 Cost consequence analysis for each unit.

Unit = 1 Agenda for Change Band 6 library and knowledge specialist embedded within a Primary Care Training Hub or equivalent, providing services to primary care and ICBs across a specified system boundary

	Average Costs	Benefits
Items that will be expressed in monetary terms	<p>Salary for qualified librarian knowledge specialist</p> <p>Agenda for Change 22/23 mid-point Band 6 with on-costs but excluding high-cost area supplements:</p> <p>£46,244 per annum</p> <p>Employment costs and additional administration costs of wrap-around services by employing provider Trust-hosted NHS knowledge and library service.</p> <p>£5,500 per annum</p>	<p>Net economic benefit from investment based upon Gift of Time research cost benefit ratio of 1:2.4 based on savings of clinicians’ time alone</p> <p>£72,442 per annum</p> <p>If service activity is based upon making evidence decision ready (synthesising and summarising evidence from research and examples of good practice) this cost benefit ratio increases to 1:3.85 giving a net economic benefit of £147,470 per annum</p>

Items that will be expressed in natural units/narrative	Supervision and development costs for librarian knowledge specialist	<ul style="list-style-type: none"> • Improve equity of access to evidence and knowledge for staff and learners in primary care • Use evidence to better identify and meet the needs of populations • Improve patient experience of care • Improve education and training experience • Improve safety and reduce litigation costs • Improve satisfaction and wellbeing of staff – more motivated, better retention
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The cost of the pilot per annum was £825,000.

Numerous benefits were delivered which can be directly linked to the priorities of Primary Care Training Hubs and the wider NHS. Introduction of embedded librarian knowledge specialist roles have improved equity of access to evidence and knowledge for staff and learners in primary care at the selected project sites. This has underpinned the education and training experience of staff but also led to improvements in using evidence from research to make informed evidence-based decisions about patient care and service delivery. By summarising research evidence, knowledge specialists release the time of staff working across primary care, enabling them to be more assured that the care they provide is based upon evidence that will lead to improved patient experience and care outcomes. This, and enabling staff to do their own research more effectively can also be seen as contributing to supporting the wellbeing and motivation of staff, which in turn will lead to better retention.

If the **1:3.85** cost benefit ratio is applied, the pilot delivered a net economic benefit to the NHS of at least **£2,351,250** per annum. If there was a minimum of 1 embedded knowledge specialist employed in each of the 42 integrated care systems in England, to meet the evidence and knowledge needs of primary care staff, this would lead to a net economic benefit for the NHS of at least **£6,583,500** per annum.

4. Conclusion

This evaluation demonstrates that the fifteen embedded librarian knowledge specialists have improved access to and use of research evidence and knowledge for a wide range of staff and learners working in primary care and ICBs. The roles contribute to saving staff time which can be put back into direct patient facing care. The roles bring value helping staff and learners to feel more informed, improving the quality of patient care. There are numerous benefits of employing an embedded knowledge specialist which align to the priorities of not only the Training Hubs but also ICB objectives, the priorities within the Long-Term Plan, to meet recommendations within the Hewitt Review and meet the overall quadruple aim of the NHS.

4.1 Recommendations

The following recommendations are based on this evaluation:

1. ICB leaders, clinical specialists and knowledge service teams work together to advocate for the benefits, positive impact and value of NHS knowledge specialists working in primary care.
2. Primary Care Clinical Directors are asked to consider how well they and their staff are using evidence and knowledge to inform their decisions?
3. Primary Care Leaders are asked to promote digital knowledge resources including BMJ Best Practice, the national clinical decision support tool, and to work closely with their local NHS knowledge and library services.
4. At least one dedicated librarian knowledge specialist is appointed into primary care to underpin the use of evidence, upskill teams to use digital knowledge resources and facilitate knowledge sharing to inform productivity and innovation. ICBs and Primary Care Networks are invited to work with the local knowledge service as part of their workforce planning.
5. NHS organisations work with NHS England and local services to review funding arrangements ensuring equitable provision of high-quality knowledge and library services.

Appendix 1 for examples of the range of activities undertaken by embedded primary care knowledge specialists

Induction/awareness: New to practice/return to practice sessions, introductory sessions to staff in practices, attending conferences for practice nursing staff.

General Promotion: Setting-up dedicated mail inbox, sending leaflets out to practices, Libguide/intranet pages highlighting KS role resources for primary care, resource lists for particular groups, adding materials to training Hub virtual learning environments and websites, network-wide installation of Libkey Nomad, pop-up stands at various events and locations, establishing library ambassadors, E-book promotions, tweets on dedicated account.

Training/education: Bite-sized info skills training, reflective writing sessions, Lunch and learn sessions about library resources, library resource sessions for groups – e.g. Pharmacy, short 10 min problem-based learning mini-sessions, creation of short bite-sized videos on how to register for NHS OpenATHENS, health literacy awareness sessions, contributed to research webinars, advising on routes to publication, critical appraisal workshops, present at protected learning time sessions, early-evening drop-in sessions, training on academic poster design, introduction to creating infographics training delivered, study skill sessions for apprentices, basic digital literacy for patients/carers

Events to provide proactive evidence summaries: Regular attendance at clinical governance meetings, attend Primary Care Network Boards, attending Fellowship sessions, presenting evidence summaries to working groups, taking part in specific projects and programmes of work e.g. wellbeing, leadership development, attending communities of practice for various groups, leader conference, practice manager meetings, community of practice for personalised care, attending clinical design authority meetings with lead GPs.

Knowledge Mobilisation: Current awareness alerts, updating lists of local support sites e.g., bereavement, addiction; sharing an EDI bulletin, compiling a catalogue of Primary Care Network case studies and best practice examples, facilitating knowledge cafes, prescribing bulletin, wellbeing, diversity, and inclusion reading and book/film clubs.

Appendix 2 Examples of the range of contacts made within primary care

- Leads for Advanced Clinical Practitioners, Public Health, Nursing Associates, Paramedic Associates, Physician Associates
- Social Prescribing Leads
- GP Specialty Training Leads within Trusts
- Primary Care Network Clinical Directors, Managers, Nurse Leads
- Primary Care communication Leads
- Visits to surgeries/practices
- Associate Directors digital strategy
- Project and programme leads
- GP Programme Directors
- Training Hub operational groups
- Quality and Transformation Leads in Primary Care and ICS
- Heads of Primary Care Network delivery and development
- Learning Environment Leads
- Pharmacy Leads
- Trailblazer GPs working on service improvement projects.
- Community dentists
- QI Leads

Appendix 3: Selection of evidence search and summary topics

- Overview on adult ADHD
- Evidence for using pyridoxine for alcoholic peripheral neuropathy
- Should obesity moderate the antibiotic prescribing threshold in primary care populations presenting with infective respiratory symptoms?
- Intersectionality framework research in healthcare
- Primary Care in south Nigeria
- Staff networks and protected characteristic groups in healthcare
- Reverse mentoring
- Differential attainment/equality standards and career progression
- Scoping search to see what quality improvement initiatives have been taking place nationally in general practice
- Group dynamics/engagement/interaction - online vs face-to-face
- Reflection tools in medical education and clinical practice, including "transformative reflection"
- Quality improvement initiatives in general practice related to access and capacity
- Oral health and child neglect. When to make a safeguarding referral?
- Neurodiversity in healthcare professionals. How these conditions present/are recognised in those working in healthcare, difficulties and barriers faced in the workplace by those affected and any recommendations for how these difficulties can be overcome/mitigated
- What are the clinical health benefits of the neater equipment range, which includes the whole appliance, neater eater arms and neater eater supports? What social care needs does this equipment support?
- Updating guidelines on drug choices
- Prevention of violence
- Interventions to encourage attendance and engagement with training
- Support for cost-of-living resources

- Frequent attenders in General Practice
- Barriers to accessing Long-Acting Reversible Contraception in Primary Care
- Yoga and improvements in wellbeing
- Group consultations in Primary Care
- Prediabetes in patients whose first language is not English
- Recruitment and retention of GPs in deprived areas
- Artificial Intelligence in Primary Care

Appendix 4 Activity Data

PCTH	Total number of mediated literature searches	Number of information resource related queries	Number of user education sessions delivered	Number of people receiving user education	Number of copies of articles or e-book chapter downloads provided to staff
Bedfordshire, Luton and Milton Keynes	49	104	45	960	11
Buckinghamshire	95	24	57	254	8
Derbyshire	47	67	21	178	42
Leeds	74	52	67	240	76
Leicestershire	40	232	5	27	125
North Central London	38	190	87	809	109
North East and North Cumbria	30	313	22	510	76
North East London	21	1121	62	609	101
Nottinghamshire	58	79	55	264	98
Oxfordshire	168	32	44	141	100
Somerset	71	52	29	268	133
South West London	82	11	57	131	9
South Yorkshire and Humber	82	85	54	492	142
Surrey	117	94	70	497	175
Sussex	149	25	3	3	152
Total	1121	2481	678	5383	1357