

NATIONAL DISCOVERY SERVICE

USER RESEARCH

HEALTH EDUCATION ENGLAND

Version: 1.0

Recipients: Lucy Reid, Helen Bingham - Library and Knowledge Services, Health Education England

Authors: Stephen Hale, Helen Taylor - Lagom Strategy

Issued: 24 April 2019

TABLE OF CONTENTS

1 OVERVIEW

1.1 EXECUTIVE SUMMARY

1.2 PROJECT GOALS

1.3 THE SCOPE OF THE PROJECT

1.4 PROJECT TEAM

1.4.1 Lagom Strategy

1.4.2 Health Education England, Library and Knowledge Services

1.5 ACTIVITIES

1.6 KEY ASSOCIATED DOCUMENTS

1.7 BACKGROUND TO THIS PROJECT

2 USER RESEARCH

2.1 METHOD

2.1.1 Qualitative research

2.1.2 Quantitative research

2.2 KEY FINDINGS FROM THE USER RESEARCH

2.2.1 Users express a strong desire and need for information

2.2.2 Some users are worried that libraries are under threat

2.2.3 Heavy users tend to be very satisfied with library services. Others may not know about them.

2.2.4 There are multifarious potential sources of information and associated behaviours

2.2.5 Users need information that is currently hosted on local sites or intranets, as well as national and international resources

2.2.6 Users often need the latest on a topic, which they may not know to search for

[2.2.7 Users operating in a learning mode have quite different behaviours to those who are practicing](#)

[2.2.8 Users have developed many habits and tactics to remember information they have found before](#)

[2.2.9 It's common for users to work on the move, using multiple devices](#)

[2.2.10 Choice of device depends on availability and context, but mobile devices have become the default for some](#)

[2.2.11 It's common for people to work across organisations, and across roles](#)

[2.2.12 There's a clear shift away from paper, but many still prefer printed materials to read and annotate](#)

[2.2.13 Users have developed numerous and diverse workarounds and hacks in order to access information](#)

[2.2.14 Some users search with and for others](#)

[2.2.15 Users are frustrated by multiple passwords and institutional logins](#)

[2.2.16 Speed of information can be critical especially \(although not exclusively\) for those in patient facing roles](#)

[2.2.17 For some users convenience is everything](#)

[2.2.18 Users value the ability to quickly retrieve previous files and searches](#)

[2.2.19 Users are savvy to the challenges of silver bullet national solutions](#)

[2.2.20 Users start with what's easiest, and feel some guilt about doing it](#)

[2.2.21 Users value services that filter and rank lots of results to give them utility](#)

[2.2.22 Users place a high value on the recommendations of their peers, and have a strong impulse to share what they find](#)

[2.3 GAP ANALYSIS](#)

[2.4 VALIDATING THE USER NEEDS](#)

[2.4.1 Analysis method and outputs](#)

[The overall need of a service is high](#)

[Most users exhibit several behaviours within their role](#)

2.5 PRIORITISING THE USER STORY BACKLOG

3 ANNEX I - DISCOVERY RESEARCH

3.1 RESEARCH SOURCES

3.3 USER PARTICIPANTS (IN MODERATED ACTIVITIES)

3.3.1 User interviews

3.3.2 Workshop

3.3.3 Field visits

4 ANNEX II - OUTPUTS

1 OVERVIEW

1.1 EXECUTIVE SUMMARY

The user research was conducted by Lagom Strategy (a digital service Discovery phase specialist agency) in March and April 2019.

The work focussed on user research to inform a potential National Discovery Service, building on previous work.

The research activities were conducted in line with the definition and guidance of a [digital service Discovery phase](#) mandated by the Government Digital Service (GDS) Digital Service Design Manual. All publicly funded digital services are subject to such a Discovery phase before proceeding to the next phase of technical development and design, and passing subsequent service assessments.

The user research has concluded with a validated and prioritised user story backlog for the delivery team to consider when progressing the service.

1.2 PROJECT GOALS

At the start of the project we agreed on these goals with the Library Knowledge Services team:

- A. Better understand the triggers, experience, context, behaviour and needs of the prospective service users
 - a. Tease out if and how needs range across the user roles or disciplines
 - b. Identify the content they most / really need from a prospective service
 - c. Understand the current gap to meeting those needs
- B. Augment the existing backlog with missing user stories
- C. Test and validate the user stories to frame an evidence-driven (re)prioritisation of the backlog

1.3 THE SCOPE OF THE PROJECT

The scope of the project was limited to conducting user research, building on previous work commissioned and conducted by the Health Education England Library and Knowledge Services team.

This work presents the findings of the user research, rather than making any recommendations about how to proceed.

1.4 PROJECT TEAM

1.4.1 Lagom Strategy

- Stephen Hale - Lead Digital Strategist and Project Lead
- Dr Helen Taylor - User Researcher and Delivery Manager
- Linda Young - User Researcher
- Liam King - Digital Strategist
- Stephanie Maskery - User Researcher

1.4.2 Health Education England, Library and Knowledge Services

- Lucy Reid
- Helen Bingham
- Helene Goring
- Richard Bridgen
- Jenny Toller
- Dominic Gilroy

1.5 ACTIVITIES

The user research was conducted in March and April 2019.

These activities allowed us to generate the findings and insights in this report and other outputs:

1. **Kick-off workshop** with key project stakeholders (7 March)
2. **Reviewed documents** and previous work
3. Conducted **26 one-to-one user interviews** with users
4. Ran a **user needs workshop** with a range of stakeholders and 5 end user role representatives, to generate proto-personas and user journey scenarios (4 April)
5. Analysis of a **user needs survey** with 454 responses
6. Conducted **2 field visits** to observe users in their own context
7. Created and prioritised **38 user stories** with the HEE team (23 April)
8. Presented a project **show-and-tell** (23 April)

1.6 KEY ASSOCIATED DOCUMENTS

- Proto-persona profiles
- User story backlog

Note: **all** project outputs and documentation is gathered in the project's dedicated SharePoint folder administered by HEE.

1.7 BACKGROUND TO THIS PROJECT

Health Education England has a strategic vision to enable access to knowledge and evidence for NHS bodies, their staff, learners, patients and the public.

There are currently multiple systems to manage knowledge and evidence, owned or paid for by national and local NHS organisations.

Previous work commissioned by HEE has suggested a need for a single, national service to enable staff to connect seamlessly to trusted, quality resources and knowledge services.

This service has been variously described as a National Discovery Engine, and Single National Gateway (Ken Chad).

Previous work commissioned and conducted by Health Education England has gathered stakeholder feedback, and identified potential products on the market. This work has led to the development of a set of requirements for a proposed national discovery service.

The user research described in this report is intended to build on this previous work, and to provide evidence to make informed decisions about how to proceed.

2 USER RESEARCH

2.1 METHOD

Our researchers consulted with a range of users to explore their context, needs, emotions and behaviours.

2.1.1 Qualitative research

- 26 one-to-one interviews with user representatives
- 5 user participants in a user needs workshop
- Observed 2 users in the field, in their own context (with a Practice Development Nurse at Leeds and York Partnership NHS Foundation Trust, and an Information and Research Officer at Bristol Community Health)
- Reviewed open text comments in an online survey with 454 respondents

2.1.2 Quantitative research

- 454 respondents to the online user needs survey

Note: due to budget and time restraints, the survey was an online survey in which links were sent to email addresses. It is appreciated that this brings in a bias toward users with a higher level of digital literacy. This was considered when interpreting the results and balanced by interviewing users with lower digital literacy.

2.2 KEY FINDINGS FROM THE USER RESEARCH

2.2.1 Users express a strong desire and need for information

For most users, the need for information and evidence is critical to their ability to carry out their role. Most users are able to clearly articulate their particular needs, as well as their frustrations when their needs are not met.



“I need Trust protocols developed by our hospital, national guidance, summaries of product characteristics, information for teaching, new

research development, patient information - often video, leaflets or websites.”

“I need information about rare conditions like unusual tumor types - things I haven’t committed to memory.”

“I need to keep up to date with evidence based practice. For example to review practice for continence care I need to access current evidence and NICE guidance.”

Some express assumptions about the information habits of others.

“Junior doctors are Facebook, WhatsApp, nothing more...they are never going to become proper doctors, the way they are behaving”

...but this wasn’t borne out by the user research, with almost all users describing a range of information seeking, and a rich ecosystem of tools and methods.

2.2.2 Some users are worried that libraries are under threat

Some users may have been partly motivated to take part in the user research because of their support for NHS library services. Several users expressed unsolicited views on the future of library services.

“Don’t get rid of the library”

“I am 100% satisfied with library services. I can’t rate them highly enough. They have never let me down. They are responsive, helpful and knowledgeable.”

While other users reflected on the changing role of library services, the need to adapt to technology, and the changes needed within the library services profession.

“I need librarians doing specialist librarian work, not doing people’s housekeeping.”

2.2.3 Heavy users tend to be very satisfied with library services. Others may not know about them.

Regular users of knowledge and library services tend to be able to find what they need using existing tools and methods. Some have an academic background or some other exposure to discovery techniques that help them to navigate the tools available.

“I’ve done two Masters degrees so I know how to use databases, and how to ask for help from librarians.”

These regular users tend to be very satisfied with the service they receive from Library and Knowledge Services teams.

“Our library services are constantly reaching out to help. They’re really good. I probably harass them.”

But they recognise that they may not be typical, and that their peers and colleagues are less able to benefit from access to knowledge and evidence.

“My colleagues would go to Google for everything. They have a lack of understanding of the resources available to them.”

“I’ve ended up being the only one in our team who can do it.”

2.2.4 There are multifarious potential sources of information and associated behaviours

Users describe a diverse set of information sources necessary to carry out their particular roles.

“I start by looking at NICE guidance, and Cochrane. I sometimes use PubMed or Google Scholar. I might just Google it, or I might go to NHS Choices.”

“I need employment legislation, business good practice, information from CIPD and ACAS.”

“I rely on information about guidelines, competency reviews, scientific articles, medical trials.”

“Athens for searching guidelines or competency reviews. NICE for competency reviews and guidelines, MedLine for information about medical trials.”

“If there is a RCOG guideline, I go to the College website. If there is a NICE guideline, I go to the NICE guidelines website. If there isn't, then I go to MedLine through Athens”

While there are some similarities in the way users search and use information, users also have diverse sets of preferences about the way they search and consume information.

“Each month I go through my list of journals and see what's relevant to me, and download what I want to read.”

“I listen to audiobooks in the car on the way to and from work. I know that I can finish a book in a week by doing that. I might not take as much in because my mind might wander. But I know I'm more likely to finish it if it's an audio book.”

2.2.5 Users need information that is currently hosted on local sites or intranets, as well as national and international resources

Users describe the value of national sources of information and evidence, but they also place a high value of local sources.

“I look more at local guidance than national. I'd say 80% local, because I know the national guidance, but I have to remind myself what applies in a trust.”

“For dentistry, the Scottish produce excellent overviews of recommendations to follow. They are concise and easy to read and everyone recognises them as excellent guidelines, so we use Scottish guidelines in Southampton.”

Some valuable local sources of information are published in a way that enables access.

“Some trusts publish their protocols openly rather than on their intranets, so you can find them with Google. They’re not sensitive so there’s no reason to restrict access.”

But some of the sources that users value are published on intranets or other exclusive platforms.

Users express frustration at being unable to access locally published information when there is no reason to restrict access. And some have developed methods to work around the system.

“We’re all meant to be working together but we all have these separate resources and we don’t allow them to touch.”

“Local guidelines are stored locally, so Junior doctors have workarounds. They use WhatsApp and other tools to share guidelines and pathways.”

“The NHS isn’t very good at closing accounts, so you end up with access to other intranets. This can be useful if they have published their guidance there.”

While other users are already thinking about solutions.

“We need something in which the pathway is centrally managed, but you can add local policy and guidelines separately.”

“We could do with a platform to manage guidelines and best practice. Map of Medicine was an attempt to do this.”

“What on earth are we doing replicating things locally? I don’t believe people are as special as they think they are. We should expose the fact that we have 200 versions of the same thing.”

2.2.6 Users often need the latest on a topic, which they may not know to search for

While most users describe the way they search for specific pieces of information, many also describe a need to be alerted to new information on a subject, that they may not have otherwise known to look for.

Some users already have in place ways to receive personalised alerts on niche topics.

“I get a lot of email updates and newsletters. I subscribe to things of particular interest to me like genomics.”

“I get monthly emails from Yorkshire & Humber Clinical Networks. I’ve signed up to the bits that interest me, and so I get good practice from elsewhere.”

Some users are concerned about information overload, particularly related to email.

“You get to a point where you just delete everything even though some of it may be useful.”

But there seems to be a clear desire for quite sophisticated personalised alerting service, alongside methods to initiate a search.

“A new service would need to ping you an email when something is published. So it alerts you when new articles which match your search criteria are published.

“Some kind of alerting system might be good, rather than having to search.

2.2.7 Users operating in a learning mode have quite different behaviours to those who are practicing

Users in training tend to access information and evidence tools and services most frequently.

“I called on the help of Library Services for help with my dissertation literature searches.”

They also have quite different behaviours, with more reliance on books and physical sources, and different habits for consuming information.

“I look at guidelines, books and journals every day.”

“If I’m accessing something for using academically I’ll print it out and write all over it.”

Users who have previously completed training, reflect that the ways they use information has changed now that they are practicing.

“I don’t have time to access journals or books. Students might need to do this, but I don’t have time.”

“I used books when I was doing courses, but now everything is electronic.”

2.2.8 Users have developed many habits and tactics to remember information they have found before

Users have a huge variety of digital and non-digital ways to remind themselves about information and evidence they have previously found.

“I keep lists of useful information in my filofax”

“I am an obsessive list maker in Google Keep.”

“I tend to save PDFs and put them onto USB sticks.”

“I have my own Google bookmarks”

“I’m starting to keep things in a Word document”

2.2.9 It's common for users to work on the move, using multiple devices

Some users describe working in an office, using the same technology every day. But this seems to be relatively rare.

Many users describe routinely working on the move, sometimes remotely, and from multiple devices.

“I use my phone if I'm on the bus. You can't help coming across things, so I do some of this outside the office, and outside work time. It's easier on my laptop though.”

Users describe increased expectations that they are able to work from anywhere, and even express guilt about taking time out to search for and consume information and evidence.

“It would be unbelievably indulgent of me to be in the library reading journals. I feel guilty if I'm in the library for an hour or so, even though I know it's work.”

For some users, using information on the move seems to create significant inconvenience.

“If I want to have a look at [information I print] and I know I'm going to be out then it'll go with me, that's why I always carry three bags around with me.”

2.2.10 Choice of device depends on availability and context, but mobile devices have become the default for some

Some users describe the increased importance of accessing information from mobile devices.

“It's really common to check something in a group setting like a ward round. Someone will say “who's done exams recently?” We'll Google it and then crack on.”

“There are shared computers all over. But a lot of what I do is look something up on the move. So it's done on my mobile, in 2 minutes.”

But some users describe the difficulty of using discovery software and systems that are not optimised for mobile devices.

“I might check email on my phone, but it’s too small and fiddly to do too much on. I need a bigger screen so that I can see things.”

“For Athens, I would always use a laptop. I have dyslexia and it works better on a bigger screen.”

While for others, access to information and evidence is limited by their access to any technology at work.

“Access to a computer is a real problem. We have 2 computers that aren’t working. Last night I couldn’t get my emails. Our printers and scanners aren’t working. We have laptops but they are very slow. It can be stressful because we get behind and patients have to wait.”

“Sometimes I use my phone, but we have really bad signal and wifi, and the screen is too small.”

2.2.11 It’s common for people to work across organisations, and across roles

It appears to be common for users to work across several organisations simultaneously, and sometimes across more than one role.

Users express frustration that they are unable to access the same information from within different organisations.

“I work for more than one organisation, which makes it complicated to log in to things.”

“The health service is run by locums and junior doctors who move around and change roles a lot. That’s who we need to focus this service on.”

And users describe the difficulty of collaborating with others who have different access to information.

“Where you don’t work for same organisation as the people you’ve supervising you don’t always have the same stuff or access and authentication to stuff.”

“We have a 2 tier workforce: NHS staff and contractors. They can't access the same things.”

2.2.12 There's a clear shift away from paper, but many still prefer printed materials to read and annotate

Some users talk about operating in an entirely paperless ways.

“It's all on screen.”

More commonly, users describe a shift away from paper, but an attachment to physical information resources for some things. Some users express guilt about this attachment to paper.

“Occasionally one has to get a book from the library itself. That tends to be more for surgical technique and medical conditions. When it comes to guidelines and medical evidence, the main source of access is the internet”

“I print more than I think I should. I know we should be paperless.”

In particular, users describe their need to annotate pieces of information with their own notes. Sometimes this is done digitally, but many users seem to prefer the ease with which they can make notes on printed paper.

“The library send me PDF versions of papers. I tend to read them from the screen, and make notes on the PDF using sticky notes.”

“I prefer paper so even if I get a PDF, I usually print it out, as I like to have it in front of me and highlight and annotate it all.”

2.2.13 Users have developed numerous and diverse workarounds and hacks in order to access information

Users have found countless ways to consume information, often despite the tools provided for them rather than because of them.

These workarounds often enable users to store information in order to access the same information from different locations, and on different devices.

“You want to see things you’d seen before. I’ve created my own system to track articles and keywords so I could go back to it.”

“I use the Notes app on my phone to copy a link to so that I can return to it later. Sometimes I put things on a memory stick. And I have Endnote through the university, but nothing similar through the NHS.”

“Some people have better memories than I do, so may not rely on storing or searching for information like I do.”

“If I’m on my work phone and want a paper I’ll usually email myself so that I can access it to print it off.”

“I use Google bookmarks, or copy and paste into a Word document. I don’t use pen and paper because I can’t read my handwriting when I go back to it.”

“I use Favorites in IE, and Notes on my iPhone - I copy links to a folder called “work stuff”. Or I email myself.”

2.2.14 Some users search with and for others

Most users describe searching for information and evidence as a solitary activity.

But some heavy users describe searching on behalf of colleagues, or helping less confident users.

“I won’t do it for them, but I will try to point them in the right direction to find the information they need.”

And users in patient facing roles describe how access to the internet has changed the dynamic of searching for information on behalf of patients.

“Parents [of patients] have access to the internet on the ward via their phone anyway.”

“I might sometimes look something up with a patient. They do it themselves and come back with the wrong information.”

2.2.15 Users are frustrated by multiple passwords and institutional logins

Almost without exception, users seem to struggle to manage the passwords required for the multiple knowledge and information systems that they use.

“I find multiple logins very difficult. There are times that I go round in circles because I’ve not got the right set of passwords. It’s a nightmare.”

“Often I will need to separately log on to Clinical Key to find the article. If I just click on a link in an email, I’ll never actually get to it because the chain of logins.”

“Open Athens is really really annoying for mobile access. It’s appalling if you need to log in for open access. By the time you go through multiple steps to log in, you’ve lost your search.”

“It always asks you to log back in which I’ve already done! You only have to click on it but it’s just annoying.”

Some users describe the particular problems this creates for working on the move.

“It’s fine on my laptop because it remembers my passwords, but I’m not always using my laptop at the point that I need something.”

For some this has specific negative consequences, and they have had to make adaptations they work.

“If I need access to certain sites during a consultation, I don’t want to be struggling with passwords in front of a patient, so I have to plan for that.”

“I have an Excel sheet with 7 pages of passwords. It’s ludicrous. I can’t even remotely manage them all.”

“Most people aren’t able to manage all of this. In the system passwords are scribbled on computers.”

2.2.16 Speed of information can be critical especially (although not exclusively) for those in patient facing roles

For some users anything that slows down their ability to find information and evidence is critical to the utility of the information.

“If I’m with a patient with a pre term labour, I need to let her get changed so that I can examine her. So I’ve got 2 minutes to sit down and eat a piece of cake look and something up on my phone. It’s often about finding that opportunistic moment.”

“The main issue is time. At work I don’t have time. If there was a magic button that gave me fast access to the databases I’d use it.”

This is also true for users who are in training roles, although the need appears to be slightly less urgent.

“If I can’t get access to a paper within a couple of days then I may lose the train of thought completely”

Some users delegate searching for information to others, because of the perceived time it takes to complete a search.

“The minute you’re near senior management you don’t have time, so you need people to do it on your behalf.”

2.2.17 For some users convenience is everything

Users often give up if they are not able to find and use the information they need, rather than spending time using tools that seem to them to be inconvenient to use.

“I’ll search for effective treatment and find an interesting article. I’m really happy at finding it and then really not happy as I can’t access it, which is heartbreaking!”

“For some things I can only see the abstract, so I have to extrapolate from that.

“As a clinician if I can’t get access, I give up and try something else.”

“You can always get something. It’s just about how much you can bear the faff.”

Some users compare the convenience of tools that they use to search freely available sources, with the relative inconvenience of the tools they have to use to find restricted information.

“With Google Scholar, you just put in the terms and it does it for you. It’s quicker than Athens. You don’t need to choose databases, which feels very clunky.”

2.2.18 Users value the ability to quickly retrieve previous files and searches

Users often need to quickly retrieve information that they have previously found, to use again.

“I need the information right now, and I need it again the next time I see this patient.”

Some users describe ways in which they would like tools to help them retrieve previously found information.

“It would be amazing to have a search history function. I can make a list separately, but I search for the same stuff time and again, so something that showed me my last 40 searches would be helpful.”

Some users have little faith that they will be able to use discovery tools to quickly retrieve information and have developed their own personal libraries.

“I tend to save PDFs and put them onto USB sticks. I’ve got a lot of USBs. I know where everything is. I store them at work. I back everything up at home, so I have a lot of USBs on specific topics. I’ll add new articles to the relevant USB stick.”

“I quite often PDF things and save them in my personal drive.”

2.2.19 Users are savvy to the challenges of silver bullet national solutions

Users often seem to be describing a need for a single national discovery solution.

“We are all the NHS but we’re all in these little pockets and work side by side, but could actually access so much more if we all join together.”

“Every now and then I search Google and a Trust has published exactly what I need. But you’re jumping around different websites to find it.”

But users also tend to be quite sceptical of big national solutions, and wise to the cultural challenges of implementing new systems.

“I generally don’t enjoy using centralised systems, because big systems like Clinical Key can search too much.”

“It would need to be universally adopted, so people are encouraged to use it, and expected to use it.”

Some users describe the benefits of operating at local levels.

“There are benefits to having things locally owned. The process of creating local guidelines is as important as the artefact itself.”

2.2.20 Users start with what’s easiest, and feel some guilt about doing it

Most users refer to the ease of use of internet tools they use in their daily lives, including WhatsApp, and Google.

These users would welcome bespoke professional tools that had the same ease of use.

“Wessex implemented a WhatsApp equivalent, but it’s not as easy to use as WhatsApp, so I don’t use it. The same with Skype - if bespoke NHS tools aren’t as good, people won’t use them.”

“I’d like to have my own lifelong learning record and to be able to add to it from multiple resources - from within WhatsApp, or when I’m reading a newspaper article. And I’d like the platform to learn from the information I’ve added, to personalise it for me.”

Often users use Google as their default starting point for a search, even if they know where the information they need is located.

“I start with a Google search”

“I don’t know anyone that doesn’t use Google Scholar. It’s my go to, every time.”

“Dr Google is useful, particularly for images. With a patient, having not seen a lot of shingles, it was helpful to see it.”

“If there’s a YouTube video, that’s very helpful.”

Some seem to feel guilt about starting with Google despite its utility for their needs.

“Oh God, I’m not sure if I’m supposed to be using Google”

“Patients are not always thrilled to see you Googling what you’re about to do.”

2.2.21 Users value services that filter and rank lots of results to give them utility

Users have high expectations for the search results interface. They expect the interface to help them understand which result is most relevant to their needs.

“Useful data gets lost in this massive sea of information.”

Users expect discovery tools to account for the complexity of working in the health system.

“Things are a bit messier than this. The search needs to account for the nuance of language and the messiness of life.”

And users expect bespoke tools to guide them to health-specific, UK-specific resources.

“We may need a health warning for sources that aren’t actually evidence based - a kitemark in the search results.”

“I want to be able to type “treatment for hand injury” into a search box like Google, and get the results that start with official sources. NICE at the top, followed by professional sources, and Mumsnet and all the rubbish after that.”

2.2.22 Users place a high value on the recommendations of their peers, and have a strong impulse to share what they find

Users often describe starting searches with trusted people rather than tools.

“Sometimes I find myself emailing random people, or connecting to the network of contacts I’ve built up.”

“I have other ways of finding things, through other people. I find what I need by grace and favour.”

“When you’re reading full paper, you think about who the author has quoted. If the author has only quoted themselves 30 times you tend to think “well who else has said it?””

Some of this searching through people, happens using social tools.

“I have a professional Twitter account, and I build networks on there. I can go there and ask a question and some of my followers may answer it, or retweet it to find an answer. I use hashtags, like I would with a library search. Our library services are on Twitter too, so I sometimes ask them for a literature search via Twitter.”

And these tools are often the way that users share information and evidence with their peers.

“I normally use WhatsApp to share links with colleagues. And I post things in professional groups on Facebook. Sharing with real people in similar roles is really important.”

Some users trust the recommendations of peers more than the ranking of search results. Some mentioned the value of the query bank format in this context.

“I think it’s the result of someone submitting a question, and then someone doing a literature search. There’s a historical database of

answers.”

Most users seem to collaborate with others routinely in their daily roles, although sharing information seems to happen outside professionally provided tools at the moment.

“Sharing via social media is very common, but it’s not built into any of our tools as far as I’m aware. It’s encouraged more at university.”

“If it’s easy to share at the time, I will do it. But I won’t come back and do it later.”

2.3 GAP ANALYSIS

The user research identified some areas in which there is a notable gap between the expressed needs of current users, and what is possible using current tools.

They include the needs to:

- search local sources of information and evidence from a single tool, and access information and evidence published and hosted on local channels (see 2.2.5)
- receive curated or personalised updates on a topic (see 2.2.6)
- annotate and store pieces of information and evidence with personal notes (2.2.12)
- sign on once to access multiple sources of information and evidence (see 2.2.15)
- easily retrieve information, searches and files, for repeat use (see 2.2.18)
- filter, rank and personalise search results to provide additional indications of relevance for users (see 2.2.21)
- surface the recommendations of peers to give an indication of the relevance and authority of a particular piece of information and evidence (see 2.2.21)

2.4 VALIDATING THE USER NEEDS

User representatives were invited to validate a list of 24 user needs identified from the user interviews, field visits and user needs workshop.

454 users completed the user needs survey, of which:

- 177 were Tutors, Perceptors and Mentors
- 320 were Practicing Clinicians
- 124 were Staff in Training
- 145 were Non-Clinical staff
- 95 were Clinical Research

NB: The majority of users classed themselves as one or more of these roles, therefore the total number in this list is higher than the 454 users who completed the survey.

2.4.1 Analysis method and outputs

24 user needs were scored by users on a range from **0 - I have no need** to **4 - I definitely need** a service to...

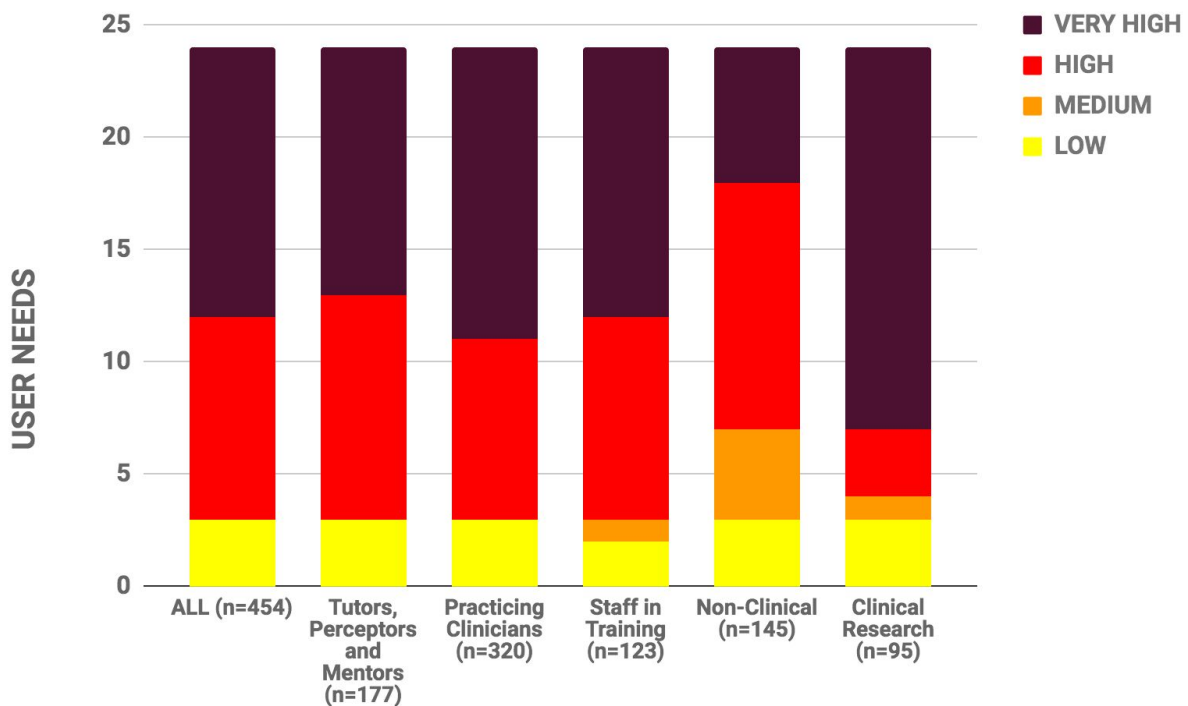
Find the relevant guideline for a condition or procedure

Each need was then categorised into **Very high**, **High**, **Medium** and **Low** priority user needs depending on the average score of the responses.

Key: **yellow = Low need**, **orange = Medium need**, **red = High need**, **purple = Very high need**

Please refer to the Analysis page in the LKS Discovery User Needs Survey Results and Analysis for the analysis to score the user needs.

The levels of user need per user role group are shown in the table below.



Of the 454 users who participated in the user needs survey:

- 63% frequently used evidence and knowledge resources and services
- 32% occasionally used evidence and knowledge resources and services
- 5% rarely used evidence and knowledge resources and services

There were a further 21 users who never used evidence and knowledge resources and services who completed the survey. Analysis on this data showed these users had LOW need across the user needs and therefore their data was not included in this review.

The overall need of a service is high

From Lagom Strategy’s experience of running similar user research in Government (including online, paper, data, information, voluntary and mandatory services within and outside health) the general level of user need identified during this research is higher than average.

Most users exhibit several behaviours within their role

The majority of users who completed the survey identified themselves as displaying more than one behavior in their role. As a result it was difficult to distinguish differences in the level of need between behaviours because users were rarely completing the survey based on only one behaviour.

The level of needs was consistent across the user roles of Tutors, Perceptors and Mentors, Practicing Clinicians and In Training. This does not mean there are no differences between them. Rather that it was difficult to identify differences in the survey data as users were not able to score their needs according to a particular behaviour.

However it can be noted that those who identified as Non-Clinical had a slightly lower need across the 24 users needs, and those who identified as a Clinical Researcher had a slightly higher need across the 24 users needs.

2.5 PRIORITISING THE USER STORY BACKLOG

The evidence from the user needs survey and other user research was used with the HEE team to inform the initial round of **user story prioritisation** (on 23 April).

The prioritised backlog of **38 user stories**, is available in the User Story Backlog spreadsheet.

The backlog spreadsheet also includes the validated level of need per user story for each user role from the survey, as well as notes on the origin and development of each user story.

3 ANNEX I - DISCOVERY RESEARCH

3.1 RESEARCH SOURCES

A range of material has been reviewed during the user research.

1. Value_Proposition_Completed_worksheet_June2016
2. Prioritised Requirements List
3. Keep-Stop-Add_outputs_HEE_July2018
4. Jobs-kinds_of_jobs_table_end-users_as_customers_ALL_June2018
5. Extract from draft business case

3.3 USER PARTICIPANTS (IN MODERATED ACTIVITIES)

All the users below were involved in phone interviews, field observations or the user needs workshop.

3.3.1 User interviews

1. Prison Nurse, NHS Trust
2. Specialty Registrar in Obstetrics & Gynaecology (inc. teaching medical students and junior doctors informally), NHS Trust
3. Senior Mental Health Nurse (inc. mentor/coach), NHS Trust
4. Advanced Neonatal Nurse (inc. teaching), NHS Trust
5. Leadership Development Manager, NHS Trust
6. Occupational Therapist (inc. some management responsibilities), NHS Trust
7. Pharmacist, NHS Trust
8. Advanced Nurse Practitioner (inc. some ward based teaching)

9. Programme Manager, Health Education England
10. Intelligence Officer in the Wellbeing team, Local Council
11. A&E Consultant (just finished training), NHS Trust
12. Consultant Gynaecologist (inc an honorary senior lecturer), NHS Trust
13. Associate Psychologist, Personality Disorder Partnership (between NHS Trust and National Probation Service)
14. Clinical Researcher, NHS Trust
15. HR Business Partner, Acute NHS Trust
16. Paramedic Practitioner, NHS Trust
17. Research Fellow, NHS England
18. Senior Manager, Health Education England
19. Dental Trainee, NHS Trust
20. Consultant Surgeon, NHS Trust
21. Medical Director, NHS Trust
22. Community Matron, NHS Trust
23. Trainee doctor, NHS Trust
24. Trainee GP, Clinical Fellow, NHS Trust
25. Healthcare Assistant, Community Hospital
26. Research Team Leader and Bank physiotherapist, NHS Trust

3.3.2 Workshop

1. Student Psychologist, NHS Trust
2. Trainee Doctor, NHS Trust
3. NHS Learning Disability Project Lead, NHS Trust

4. Emergency Assistant Practitioner (inc. trainer), NHS Trust
5. HEE Regional Dental Adviser (inc. trainer), Health Education England

3.3.3 Field visits

1. Information and Research Officer, Community Health
2. Practice Development Nurse, NHS Trust

4 ANNEX II - OUTPUTS

These outputs have been delivered in accordance with the project proposal:

1. Kick-off meeting outputs - (captured in Basecamp:
<https://3.basecamp.com/3606110/buckets/11275496/vaults/1650163970>)
2. Detailed notes from user interviews
3. User needs workshop run sheet, prompt sheets, videos and photos
4. User proto-persona profiles
5. Field observations notes
6. User stories backlog (including validated user needs)
7. Show and tell presentation
8. Report (this document)