A model to encourage library and knowledge team involvement in developing ways to capture, store and share knowledge about best practice and innovation for an organisation. Final report from the Knowledge for Healthcare Leadership Programme Project Group Two

1.0 Introduction

As part of the Health Education (HEE) Knowledge for Healthcare Leadership Programme Cohort 1 2016 we were asked to complete a project to formulate and test a model to encourage library and knowledge (LKS) staff to get involved with the capture, storage and sharing of knowledge to encourage organisations to share best practice around service improvement and innovation.

The sections that follow outline the results of our project and include the outcome of our scoping exercise; consideration of the skills and knowledge required by LKS staff undertaking knowledge management (KM) activity; engagement strategies to employ; knowledge capture tools to use at organisation level; technical specifications for a sample database for the storage of the knowledge data captured and a conclusion which contains personal reflections from the team about the process and benefits of undertaking such work.

From our early scoping it became clear that there are several national databases gathering case studies about innovation and best practice across the NHS which are available publicly. To avoid duplicating this work we decided that the focus of our project should be around the steps needed in a local NHS organisation to establish knowledge sharing by the capture, storage and sharing of knowledge about local service improvement projects. The aim of our proposed model is to facilitate people to people contact and encourage the wider spread and uptake of service improvements, innovation and best practice at a local level.

2.0 Scoping Knowledge Management Activity

2.1 Literature search

A literature search was conducted across the Healthcare Databases Advanced Search interface and Emerald Health Management databases.

The review of Knowledge Management Capture revealed that most organisations risk losing knowledge at a number of key moments. These moments occur repeatedly and can be broadly split into two areas. Knowledge is lost when the people who currently hold this information leave the organisation and there are no methods of allowing this knowledge to be retained. Knowledge also risks being lost within and across the organisation when projects and innovations are completed and the knowledge gained is not retained or shared. In both cases the knowledge can be explicit, e.g. the outcomes of a project that are not shared with other departments; or it can be implicit such as the subtle changes in working practice that someone has made over many years to improve their efficiency, but these changes have not been documented.

The literature review has revealed a number of studies that have attempted to examine these moments of knowledge loss and have put forward solutions to try to capture and retain this knowledge. These papers can be grouped into a number of common themes and details can be found in a summary of the literature search.

2.2 Library and Knowledge Service involvement in KM activities

We created a short survey to be sent to LKS managers via HEE Library Leads. The aim of this was to pose an initial scoping question around what KM activity LKS may be engaged in. From this data we would create a snapshot of the volume and types of KM engagement activity. Using a survey format with standardised response criteria, rather than handling many e-mail responses from a generic e-mail, would hopefully make managing the responses easier.

We asked the library leads to use the text in the link below for a covering e-mail to forward to all LKS managers in their patches with the link to the survey.

Initial scoping question around what KM activity for all LKS managers

2.3 Survey results

The survey was distributed during May 2016 by LKS leads to LKS managers across NHS England. A total of 55 responses were recorded.

The scoping survey provided a useful insight into LKS involvement in KM activity currently going on within individual organisations.

For details of the scoping survey see the Result from the scoping exercise May 2016 document.

The survey also identified gaps in awareness and activity which demonstrated that there was an apparent need for support and guidance for LKS teams in KM engagement within organisations. This was indicated by the lack of awareness of current activity and lack of certainty for plans to get involved in KM initiatives locally.

The survey sparked discussion among some LKS managers as to the need for another innovations database, which had been one of the proposed outputs from this project.

Concerns were also raised that working in silos as had happened previously would not be desirable and that evidence suggested that cross-sectoral working improved output and engagement.

It was recognised that whilst there were innovation databases and national projects such as the Academic Health Science Networks and the Academy of Fabulous Stuff, the local/internal picture of knowledge capture and storage within trusts or organisations was varied.

2.4 National and International Innovation and Best Practice Databases

From our scoping exercise it became clear that there are several databases which attempt to capture innovations and best practice within the NHS. Many of these are managed by local Academic Health Sciences Networks. It may be worth sharing details of these with relevant colleagues and we have added links below to some of the main databases found in 2016. Further details about all of them can be found here.

UK

The Yorkshire and Humber AHSN Health Innovation Exchange Portal	http://www.healthinnovationexchange.org.uk/
Igniting Innovation - East Midlands Academic Health Sciences Network	http://emahsn.org.uk/resource-hub/
Imperial College Academic Health Science Centre - Innovations Case Studies	http://www.ahsc.org.uk/case-study/
NHS England's Innovation Portal - Innovation Case Studies section	http://www.innovation.england.nhs.uk/case-study
NICE Local Practice Collection	https://www.nice.org.uk/localpractice/collection
NICE Savings and Productivity Collection	https://www.nice.org.uk/savingsandproductivity/collection
The Academy of Fabulous Stuff	http://fabnhsstuff.net/
The Health Foundation	http://www.health.org.uk/
NESTA	http://www.nesta.org.uk/

International

Health Care Innovations Exchange	https://innovations.ahrq.gov/
The Agency for Clinical Innovation	http://www.aci.health.nsw.gov.au/ie
Health Improvement and Innovation Resource Centre	http://www.hiirc.org.nz/

2.5 Skills and Knowledge required by library and knowledge teams to successfully implement KM activity at an organisational level

As a project team we were all mostly new to knowledge management. To consider the type of knowledge and skills required to deliver the project we each completed a before and after self-assessment of the Knowledge Management section of the Professional Skills and Knowledge Base for Health. The PKSB enabled us to provide a rating, indicating our level of skills and knowledge, in eight separate criteria relating to knowledge management. The

aggregated scores for the whole project team showed an increase in knowledge skills at the end of the project in all eight criteria. In three of the criteria; knowledge management, knowledge transfer and organisational information, all members of the project team showed an increase in skills and knowledge and one person increased their knowledge and skills by three points. All except one member of the team also showed an increase in knowledge and skills relating to knowledge sharing and collaboration. Practical application of knowledge management tools as part of the project has helped the whole team develop their own knowledge and skills in the area of knowledge management. The project has also helped us to put into practice a range of leadership, advocacy, planning and management skills.

Aggregated project team ratings for the PKSB for Health self assessment

3.0 Engagement at a Trust Level

We all work in organisations with their own structures and cultures, so there is no "one size fits all" model when it comes to thinking about who to engage with and how to approach them. You may encounter colleagues who express surprise that the LKS team wish to be involved in KM activities. They may even be resistant to any involvement from LKS colleagues.

Making contact with "library champions" in senior management roles would be a good starting point. Following this, key contacts to focus on might include the Chief Knowledge Officer, if your organisation has such a role, senior staff in the Nursing Directorate, senior colleagues working in Quality or Service Improvement, Research or Innovation departments, and also Human Resources leads and all departments involved in education.

Use the links below to read short stories from the project team that demonstrate lessons learnt from engagement - what worked, what didn't and what we would do differently.

Engagement and guerilla tactics at Christie NHS Foundation Trust

KM engagement at South Tees Hospitals NHS Foundation Trust

KM engagement at Homerton University Hospital NHS Foundation Trust

After Action Review: Engagement with KM at Poole Hospital

4.0 Knowledge Capture template

We looked at various knowledge capture templates, including one developed by Public Health England. However, we opted to use a relatively simple self-complete template to encourage more people to complete it. We also adapted this template to suit local purposes.

Use the links below to see some examples of how the template was adapted to capture knowledge about best practice and innovation from a variety of projects.

Sharing knowledge from HLG conference sessions

Quality Improvement Hub Poole Hospital Falls Knowledge Capture

Quality Improvement Hub Poole Hospital Handover Knowledge Capture

Knowledge Capture RBHT knowledge capture of innovation ESC 2016 Presentation

KfH Leadership KM Project knowledge capture

Knowledge Capture Database of Cornwall NHS guidelines, policies and procedures

Knowledge gathered in this way can then be stored and shared via a database where other people can contact those involved in an existing innovation or best practice to learn more and so grow and spread knowledge across an organisation.

4.1 Knowledge capture process - approaches to try

Paul Corney, the leading KM consultant and academic who suggested the use of the term "Knowledgeur" to describe those engaged in KM work, has identified the need to collect and share examples and stories, to acknowledge contributions and celebrate successes.

Some examples of how engagement with the KM capture process can be encouraged through events are listed here.

After Action Review of using a knowledge capture form at an event
(Poole Hospital NHS Foundation Trust)

5.0 Designing a database to store and share organisational knowledge

Initially we agreed that delivering a fully functioning database would not be our primary end goal. The scoping exercise suggested there is no real off-the-shelf product available for this job, also due to the variation in individual trusts it was decided that a 'one size fits all' solution would not work. Also that supporting a database is a much more long term commitment.

Instead we decided to suggest a schema (see section 5.1), based on the knowledge capture form we used. This would allow users to directly translate submissions from the form directly into a database. Also providing a schema has the benefit of being used in anything from a simple Access database to a large enterprise-scale SQL server (and everything in between). Which means that any library service looking at something like this is not totally reliant on having a friendly IT person, and is able to tailor the solution to their local requirements.

This is intended to be a starting point. A database created using this schema will be a simple single-table database, it can, of course, be made more complicated if there is the local need and support to do so.

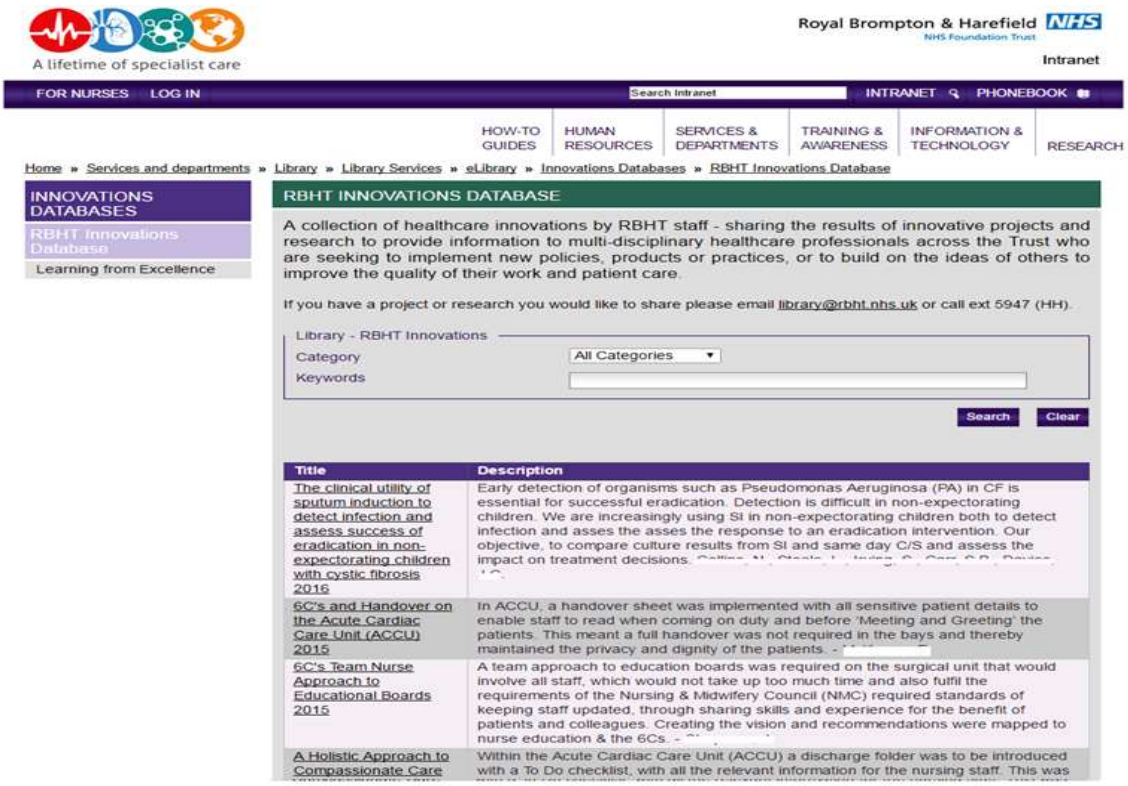
Even though we were not planning to create a database, we have created a sample one as a demonstration of what might be achieved relatively quickly and simply. This can be found https://innovationkfh.herokuapp.com

The source code can be found here: https://github.com/ChristieTim/InnovationKfH

5.1 Database structure and technical specifications

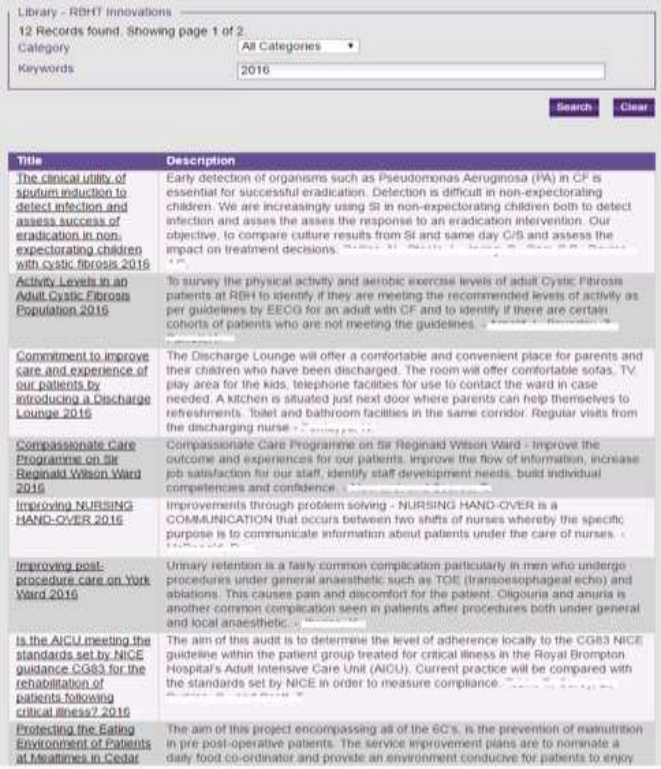
Innovation	
ID	String
Author	String
TimeCreated	DateTime
Title	String
Organisation	String
Author	String
Email	String
Context	String
Method	String
Evaluation	String
Links	String
ReviewDate	DateTime

5.2 Sample database - RBHT Innovations Database



At RBHT the IT department helped to create a database on the Trust intranet:

Running a search using ‘2016’ – brings up 2 pages containing 12 presentations



Library - RBHT Innovations

12 Records found. Showing page 1 of 2.

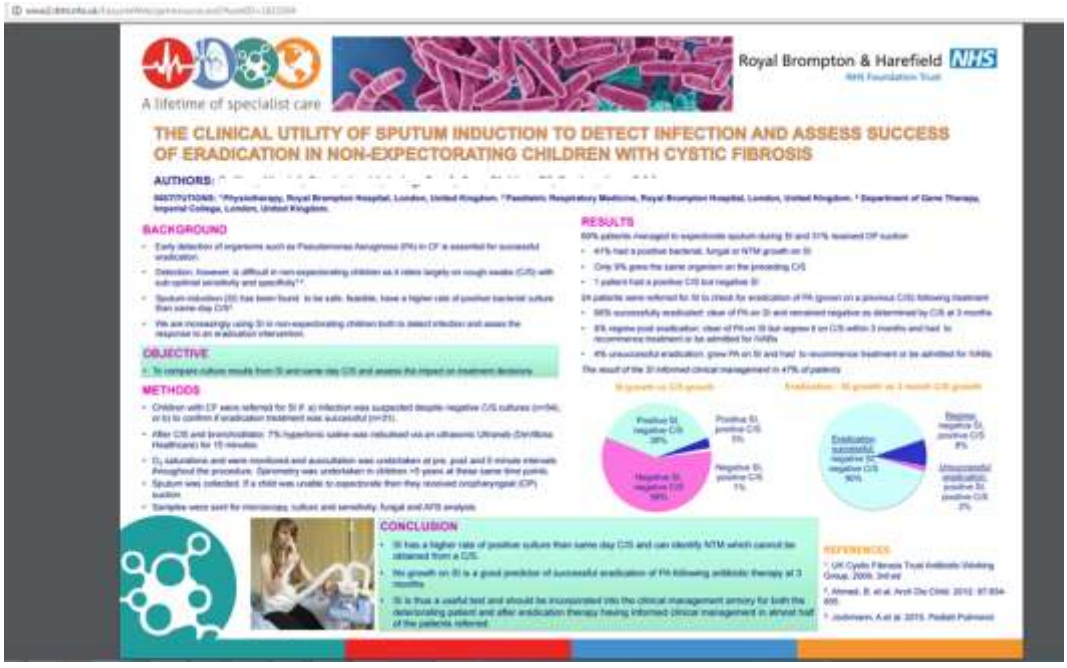
Category: All Categories

Keywords: 2016

Search | Clear

Title	Description
The clinical utility of sputum induction to detect infection and assess success of eradication in non-expectorating children with cystic fibrosis 2016	Early detection of organisms such as Pseudomonas Aeruginosa (PA) in CF is essential for successful eradication. Detection is difficult in non-expectorating children. We are increasingly using SI in non-expectorating children both to detect infection and asses the asses the response to an eradication intervention. Our objective, to compare culture results from SI and same day C/S and assess the impact on treatment decisions.
Activity Levels in an Adult Cystic Fibrosis Population 2016	To survey the physical activity and aerobic exercise levels of adult Cystic Fibrosis patients at RBH to identify if they are meeting the recommended levels of activity as per guidelines by EECG for an adult with CF and to identify if there are certain cohorts of patients who are not meeting the guidelines.
Commitment to improve care and experience of our patients by introducing a Discharge Lounge 2016	The Discharge Lounge will offer a comfortable and convenient place for parents and their children who have been discharged. The room will offer comfortable sofas, TV, play area for the kids, telephone facilities for use to contact the ward in case needed. A kitchen is situated just next door where parents can help themselves to refreshments. Toilet and bathroom facilities in the same corridor. Regular visits from the discharging nurse
Compassionate Care Programme on Sir Reginald Wilson Ward 2016	Compassionate Care Programme on Sir Reginald Wilson Ward - Improve the outcome and experiences for our patients, improve the flow of information, increase job satisfaction for our staff, identify staff development needs, build individual competences and confidence.
Improving NURSING HAND-OVER 2016	Improvements through problem solving - NURSING HAND-OVER is a COMMUNICATION that occurs between two shifts of nurses whereby the specific purpose is to communicate information about patients under the care of nurses.
Improving post-procedure care on York Ward 2016	Urinary retention is a fairly common complication particularly in men who undergo procedures under general anaesthetic such as TOE (transoesophageal echo) and ablations. This causes pain and discomfort for the patient. Oligouria and anuria is another common complication seen in patients after procedures both under general and local anaesthetic.
Is the AICU meeting the standards set by NICE guidance CG83 for the rehabilitation of patients following critical illness? 2016	The aim of this audit is to determine the level of adherence locally to the CG83 NICE guideline within the patient group treated for critical illness in the Royal Brompton Hospital's Adult Intensive Care Unit (AICU). Current practice will be compared with the standards set by NICE in order to measure compliance.
Protecting the Eating Environment of Patients at Mealtimes in Cedar	The aim of this project encompassing all of the 6C's, is the prevention of malnutrition in pre post-operative patients. The service improvement plans are to nominate a daily food co-ordinator and provide an environment conducive for patients to enjoy

Clicking on the title brings up the full text of the relevant poster or presentation



Royal Brompton & Harefield NHS

A lifetime of specialist care

THE CLINICAL UTILITY OF SPUTUM INDUCTION TO DETECT INFECTION AND ASSESS SUCCESS OF ERADICATION IN NON-EXPECTORATING CHILDREN WITH CYSTIC FIBROSIS

AUTHORS:

BACKGROUND

OBJECTIVE

METHODS

RESULTS

CONCLUSION

The Web Services Team at Royal Brompton and Harefield NHS Foundation trust is willing to share their expertise in bringing this innovations database to life with any other Trust’s IT

department. They are contactable via Marie Orara - Web Services Manager via email m.orara@rbht.nhs.uk .

5.3 Other things for consideration

There are a number of people in your organisation who will be able to assist with implementing an innovations database. Many Trusts have an innovations or improvement team who will advise on whether they would find such a database useful and let you know what their requirements might be.

Your IT department may be able to offer support in implementing the solution and they will know what technology is available in-house and how easily the database might integrate with other tools (e.g., intranets, etc.). In addition, you will need to work closely with your Trust communications team. They can advise on how best to incorporate your database into the intranet, if required, and they will also assist with promotion, which is important for the widespread adoption of the innovations database.

Depending upon local policies you may also need to involve your research and development and information governance teams.

6.0 Other tried and tested knowledge management tools

Whilst working on the project we all developed our own knowledge about knowledge management tools and using the KM Toolkit tried out a variety of these in our organisations. The stories which follow demonstrate how these tools were adapted and used in our local settings.

Knowledge Transfer and retention: leavers toolkit case study (Poole Hospital NHS Foundation Trust)

Knowledge Transfer and retention: leavers toolkit case study (Homerton University Hospital NHS Foundation Trust, London)

Innovations breakfast club (Royal Cornwall Hospitals NHS Trust)

Repository of research articles by local authors case study (The Christie NHS Foundation Trust)

Sharing research findings - a dissertations collection (South Tees Hospitals NHS Foundation Trust)

Setting up a Protopage current awareness page for Service Improvement team (South Tees Hospitals NHS Foundation Trust)

Knowledge Exchange by webex case study (Project Team and Sponsor)

Sharing Learning from Conferences: a case study (HLG Conference)

Using after action reviews case study (Project Team)

Fish bowl discussion case study (KM Study Day, York)

Further examples of knowledge management tools and case studies demonstrating how they can be used can be found on the main KM toolkit.

7.0 Conclusion, review and recommendations

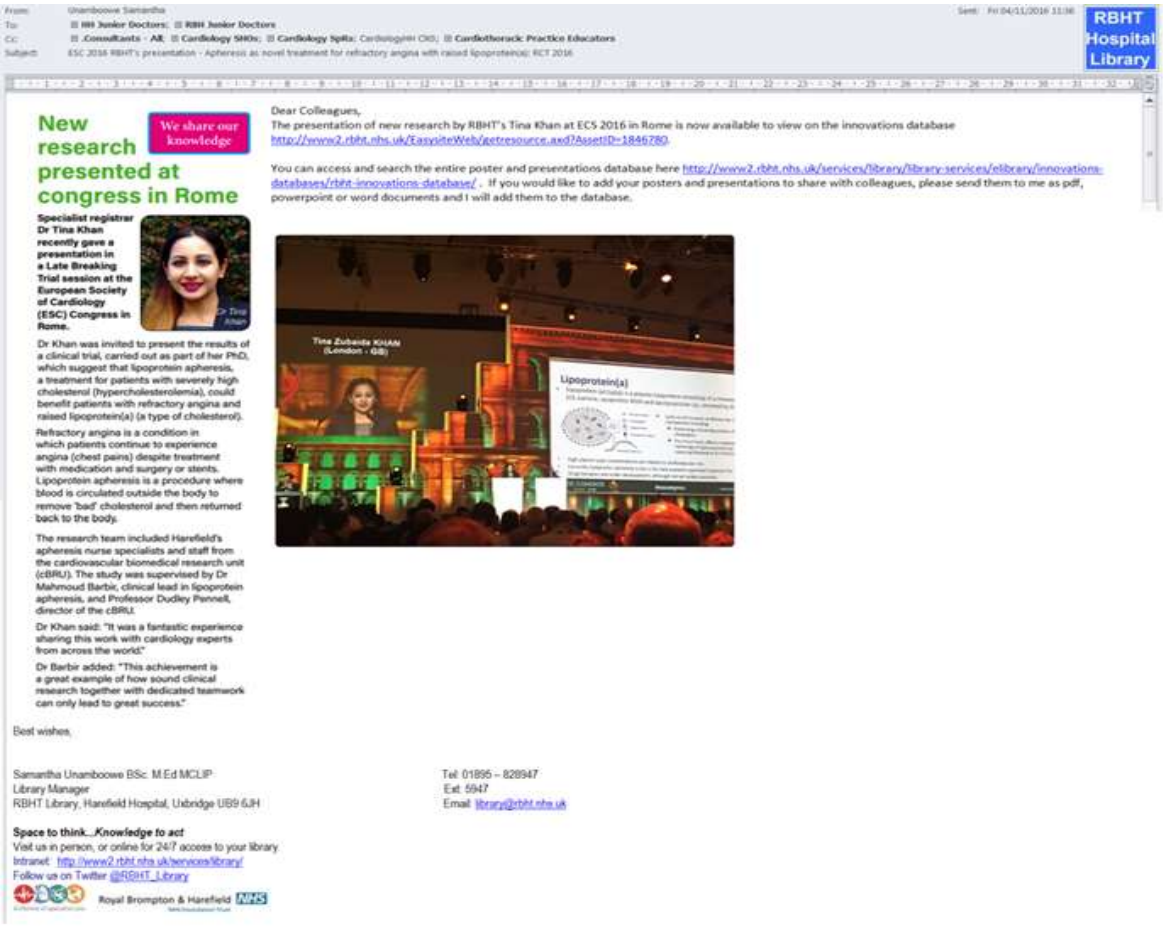
As a project team, we were mostly new to knowledge management and were on a steep learning curve from the outset. Our aim was to provide a model to help people just like us: busy library and information workers who want to engage with their wider colleagues and start to introduce a range of KM activities within their organisations. Working on this project has enabled us to see that KM is a worthwhile and even enjoyable activity, that it is possible, and not at all as complex or frightening as you might think. We have made new connections within our respective organisations and, we hope, raised the profiles of our local library and knowledge services.

In the course of the project we have learned from one another and between us have explored and tested a range of KM tools, sharing ideas and knowledge along the way. We hope this model will help others to initiate and take forward KM activities within their own organisations, enabling the mobilisation of knowledge, the sharing of success, innovation and best practice and the creation of connections for the benefit of the NHS as a whole.

7.1 The impact of KM activity

Creating an Innovations Database at Royal Brompton and Harefield NHS Foundation Trust

At the Royal Brompton and Harefield NHS Foundation Trust, the Innovations Database is used as a tool for knowledge management, celebrating achievement and promoting wider engagement as well as publicising the database and the library's role in supporting the process of capturing and enabling the sharing and using of knowledge. The approach ensures that knowledge and information that might languish forgotten in departmental silos is made accessible to all multi-disciplinary professionals, with the library being the common ground for all Trust staff. The screen below showcases the library's role in the KM journey which starts with a literature search leading into playing a role in supporting research in an international conference arena to sharing the final outcome with colleagues at home and with future colleagues joining the Trust.



RBHT Hospital Library

New research presented at congress in Rome

We share our knowledge

Dear Colleagues,
The presentation of new research by RBHT's Tina Khan at ECS 2016 in Rome is now available to view on the innovations database http://www2.rbht.nhs.uk/EasysiteWeb/getresource.axd?AssetID=1846780.

You can access and search the entire poster and presentations database here http://www2.rbht.nhs.uk/services/library/library-services/elibrary/innovations-databases/rbht-innovations-database/ . If you would like to add your posters and presentations to share with colleagues, please send them to me as pdf, powerpoint or word documents and I will add them to the database.

Specialist registrar Dr Tina Khan recently gave a presentation in a Late Breaking Trial session at the European Society of Cardiology (ESC) Congress in Rome.

Dr Khan was invited to present the results of a clinical trial, carried out as part of her PhD, which suggest that lipoprotein apheresis, a treatment for patients with severely high cholesterol (hypercholesterolemia), could benefit patients with refractory angina and raised lipoprotein(a) (a type of cholesterol).

Refractory angina is a condition in which patients continue to experience angina (chest pains) despite treatment with medication and surgery or stents. Lipoprotein apheresis is a procedure where blood is circulated outside the body to remove 'bad' cholesterol and then returned back to the body.

The research team included Harefield's apheresis nurse specialists and staff from the cardiovascular biomedical research unit (cBRU). The study was supervised by Dr Mahmoud Barbir, clinical lead in lipoprotein apheresis, and Professor Dudley Pennell, director of the cBRU.

Dr Khan said: "It was a fantastic experience sharing this work with cardiology experts from across the world."

Dr Barbir added: "This achievement is a great example of how sound clinical research together with dedicated teamwork can only lead to great success."

Tina Zubaida KHAN (London - GB)

Lipoprotein(a)

Best wishes,

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Royal Brompton & Harefield NHS

7.2 Recommendations

The next step is to disseminate the model widely and ensure that it is fully evaluated. The model will be available as part of the KM Toolkit on the Knowledge for Healthcare Blog.

- A thorough evaluation of the model has not been possible within the time frame available to us. We recommend that someone outside the project team should test the model and report on its use.
- We recommend that Health Education England (HEE) Library Leads should encourage local service managers to use the model.
- We recommend that the materials from the York Study Day are fed into and used at the national HEE KM Train the Trainer event and then subsequently at any local KM training events.
- Our scoping revealed that a range of national and international databases exist already to record improvement, innovation and best practice. We recommend the development of a central search hub that would allow these disparate resources to be searched from a single site.

7.3 Review of the KM Project

Involvement in this project has helped us all to develop skills in using a variety of knowledge management tools. In trying to assess how well we met the project brief and to identify some lessons learnt from how we worked on this project we chose to adopt another knowledge management tool to help us to reflect upon the process. Here is our team after action review of the Knowledge for Healthcare Leadership Programme KM project.

Project Sponsor comment

From the beginning of the project the group were both excited and curious about how they would approach the task to formulate and test a model to encourage LKS staff to get involved with the capture, storage and sharing of knowledge to encourage organisations to share best practice around service improvement and innovation, each member bringing their own experiences and perspectives to the group, and sharing ideas about what may or may not work in each of their trusts.

They worked well as a group and were able to draw on each other's strengths and different experiences and perspectives. This, combined with the thorough approach to carrying out the initial scoping survey and literature review helped focus them on what would become the important elements of such a model – the adaptability to a local environment, and the importance of the skills and knowledge of the LKS staff, a template designed with simplicity in mind, and the importance of engagement at a trust level – and sensibly designing the database itself to work with all of this.

When the KM toolkit task and finish group first discussed the idea of such a database, based around a perceived need and some initial scoping at West Suffolk trust, we were well aware that it was not a simple task of building a database and expecting it to do the work, but that there would no doubt be more involved. Watching the project group develop this idea and take it further than we could have expected has been enjoyable and encouraging to watch, and given yet another practical tool and framework for LKS staff to adopt to drive forward KM and innovation in their organisations.

7.4 For further information about the development of this model please contact a member of the project team:

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Appendix

Lesson plan and handout from KM Workshop "KM by Numbers" delivered at KM Study Day, 11th November 2016, York

Slides

Lesson Plan

Handout

After action review of workshop