



ACI NSW Agency
for Clinical
Innovation

Knowledge Management

An ACI Approach

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EXECUTIVE SUMMARY

The Agency for Clinical Innovation (ACI) is working with clinicians and managers from NSW Health services including Local Health Districts (LHDs) and Specialty Health Networks (SHNs), Ambulance Service NSW (ASNSW) and NSW Health Pillars to develop a holistic knowledge approach that supports system wide objectives to improve health outcomes for patients and organisational efficiency.

Following the transition of the Australian Resource Centre for Healthcare Innovation (ARCHI) in 2013, the ACI consulted with LHD/SHN's and conducted a needs analysis to identify challenges and opportunities for sharing knowledge about improvement projects and innovations.

The ACI hosted a Knowledge Solution Workshop at Australia Technology Park on 17 June 2013 with 50 representatives from LHDs, SHNs and Pillars across the state. Key themes from consultations were presented and participants identified solutions to guide the development of an approach that will support the needs of stakeholders and enhance the way innovation and improvement initiatives are shared across the health system.

This report provides a summary of the key issues identified and outcomes presented at the solution workshop, and recommendations for improving efficiency and sharing knowledge with partners across the system to improve organisational objectives.

A range of knowledge initiatives are recommended that will require a collaborative approach from across the health services. These include:

1. Establishing a Knowledge Working Party with local representatives
2. Leadership to support and encourage knowledge sharing and a culture of continual learning
3. Identifying and mapping key content
4. Establishing clear processes for sharing information
5. Supporting ACI to become a learning organisation and share lessons learnt
6. Piloting knowledge sharing activities with a small number of ACI Networks
7. Establish a central 'one-stop' Knowledge Exchange
8. Exploring activities and maximise opportunities to promote knowledge sharing across borders and organisations
9. Establishing evaluation and measurement
10. Scope the interest and feasibility of establishing a Community of Practice (CoP)
11. Working with HealthShare NSW and other organisations to develop improved equity and access to Internet and online resources

Representatives from NSW Health services have had the opportunity to comment and provide feedback on the recommendations outlined in this report.

An action plan has been prepared which outlines the specific actions and next steps required to address the recommendations above.

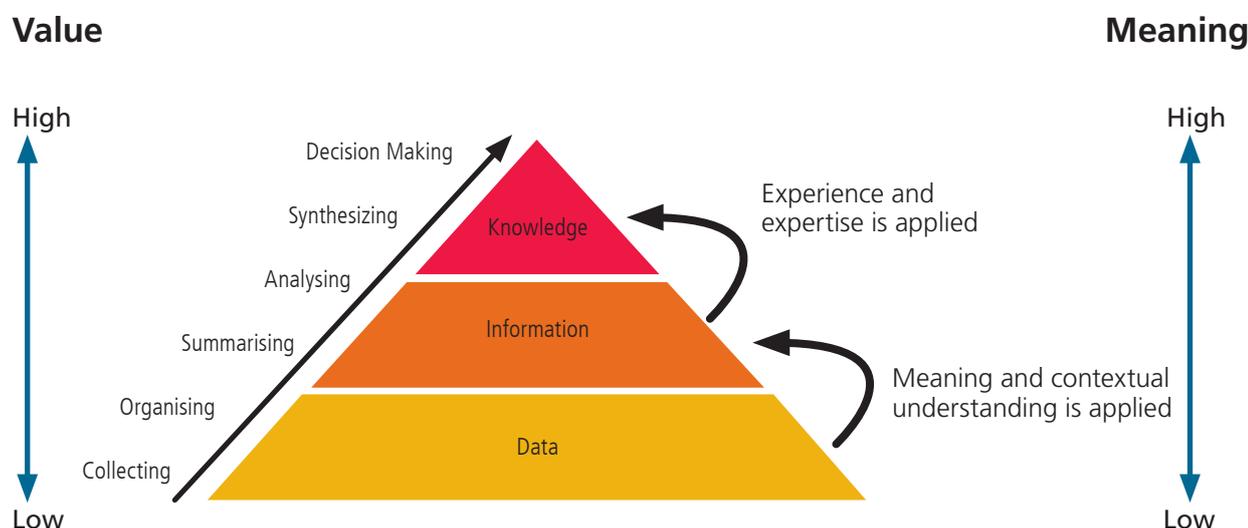
1. INTRODUCTION

1.1 What is Knowledge?

Knowledge refers to the capacity to use meaningful information combined with learning, experience and skills.

Knowledge is derived from information (which is derived from data) but it is richer and more meaningful than information. Knowledge includes familiarity, awareness and understanding gained through experience.

A dictionary definition of knowledge is “the facts, or experiences known by a person or group of people” (*Collins English Dictionary*).



1.2 What is Knowledge Management?

Knowledge Management aims to make the right knowledge available to the right people at the right time so they can deliver the best possible solutions and outcomes.

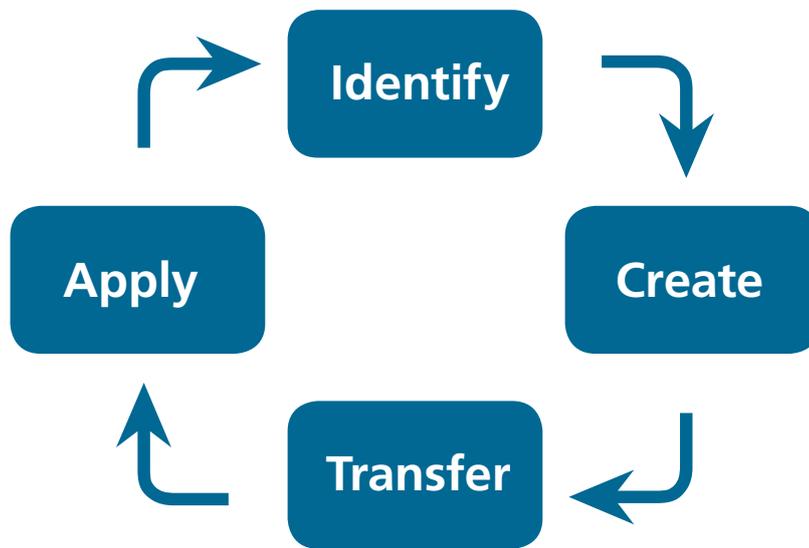
The Australian Knowledge Management Standard, as published in 2005 sets the benchmark and provides a guide for Australian organisations on where their knowledge initiatives should be focused.

Knowledge management focuses on achieving a balance across four key elements – **people, content, process** and **technology**. This helps to connect people with people and people with content through effective processes and the use of technology.

Knowledge Management is concerned with innovation and sharing behaviours, managing complexity and ambiguity through knowledge networks and connections, exploring smart processes and deploying appropriate tools and technologies (Adapted from the Australian Standard, AS 5037 – 2005).

The purpose of knowledge management is to identify, create, transfer and apply knowledge to assist in better achieving strategic objectives.

This has the potential for creating an environment in which knowledge freely flows and the collective expertise and capability of health professionals is leveraged to support learning.



1.3 Why is Knowledge Management so important in healthcare?

Healthcare is a highly complex, evidenced based environment and a knowledge intensive industry. There are significant opportunities for health services from better sharing and integration of knowledge.

“Healthcare delivery is a knowledge driven process and knowledge management provides an opportunity for improvement in process performance” (Nilakanta et al. 2009, cited in Bordoloi and Islam, 2012, p 110).

Knowledge, innovations and improvement initiatives are widely produced throughout the health system yet are often not shared in a systematic way, leading to duplication, inefficient and wasted time and resource management.

The ACI aims to partner with Health Services to develop and implement an effective approach that supports collaboration, learning capability and sharing knowledge particularly around innovation and improvement. This approach aims to:

- assist in better achieving organisational and system wide objectives
- assist in improving patient and performance outcomes
- develop capability of staff
- improve efficiency through reduced duplication of time and resources.

Knowledge management efforts should focus on organisational objectives such as improved performance, innovation, the sharing of lessons learnt, integration and continuous improvement of the organisation and healthcare partners.

Devolution of the many specialised and local health organisations across NSW presents a significant challenge to knowledge management, as each is focussed on achieving and managing their local priorities, processes, systems, structures and cultures.

It is expected the benefits of effective knowledge management will help to develop a culture of learning and will contribute to:

- Enhancing collaboration with partners
- Providing more accurate and accessible information and knowledge resources
- Assisting to reduce costs by reducing duplication of effort
- Increasing speed of response as a direct result of better knowledge access and application
- Reducing the tendency to ‘reinvent the wheel’ or ‘repeat the same mistakes’.
- Improving efficiency and quality of work with more collective and systematic processes.

An investment in building a culture that empowers health professionals to positively collaborate and encourage knowledge transfer across the NSW health system is critical to a successful implementation of a knowledge approach.

1.4 Knowledge and the ACI

In February 2013, The Australian Resource Centre for Healthcare Innovations (ARCHI), transferred to the ACI, providing the opportunity to consolidate clinical innovation knowledge for sharing across the NSW health system and beyond.

As outlined in the ACI Strategic Plan 2012-2015, the purpose of the ACI is to work with clinicians, consumers, and partners to design and drive evidence based innovation to ensure appropriate, effective, and sustainable patient centred health care.

The establishment of a robust knowledge management approach will underpin critical components of the broader ACI three year Strategy to serve NSW Health by ensuring;

- Both small and large scale innovations and improvements generated across the services are recognised and shared to benefit the broader health system
- The work of the ACI is shared across the NSW Health system to encourage effective partnerships and assist in delivering better health outcomes, improved patient experience and efficient service delivery.

1.5 Scope of the ACI Knowledge Approach

The scope of this knowledge approach is to work with key stakeholders (LHDs, SHNs Pillars, the Ministry, Medicare Locals) in healthcare to connect people and share information, knowledge and experience about innovation and improvement initiatives to assist in developing the capability of the healthcare workforce.

The Knowledge Management approach is focused on innovation and improvement, including:

- Redesign and other local healthcare improvement projects and innovations
- Developing methods and tools for sharing lessons learnt
- Sharing information and methodology on healthcare initiatives and their outcomes
- Linking People and Networking to support professional relationships
- Capability building
- Events and functions to share innovation and improvement projects.

The Clinical Information Access Portal (CIAP) continues to provide information and resources to support evidence based practice and access to databases and medical journals, and therefore the ACI knowledge approach will not include these elements in its scope.

2. THE DIAGNOSTIC / NEEDS ANALYSIS

The ACI conducted a (diagnostic) needs analysis to better understand the current state as well as wants and needs of staff including clinicians and health managers to guide the development of a relevant and effective knowledge approach for the ACI and our partners across the health system.

The purpose of the analysis was to uncover what knowledge and resources key stakeholders, LHD's, SHNs and Pillars already used and identify challenges and opportunities for sharing knowledge about improvement projects and innovations.

The scope of the knowledge analysis included NSW Health Services and key stakeholders with a specific focus on healthcare innovation and improvement initiatives.

2.1 Method

The needs analysis was carried out between April and May 2013 using focus groups and one-on-one interviews to identify key issues, enablers and challenges and to provide detail on the current state of knowledge management within the broader health system.

Qualitative methods were used to provide a rich amount of feedback. Interviews were limited to one hour and focus groups to between 1 to 1.5 hours to minimise disruption for staff.

More than 120 staff from across the health system provided input. This included 15 Focus Groups across 13 LHDs (8 regional LHD's and 5 metropolitan LHDs), 2 Health Pillars, 1 Specialty Health Network and the NSW Ambulance Service.

A broad range of rural and metropolitan staff including clinicians and managers were involved in the focus groups and interviews and provided input, including:

- Nurse Managers
- Senior staff specialists
- Clinical Governance and Quality Managers
- Senior Executives
- Directors of Governance/ Directors of Operations
- Librarians
- Redesign Leaders
- Paramedics
- Planning, System, Performance Managers
- Project Managers
- Communication Managers
- Learning and Development Managers and Nurse Educators.

Questions asked as part of the focus groups and interviews included:

- What knowledge resources currently exist in your organisation?
- What resources do you access and use? Why?
- Are there any resources that you don't use, or that are not effective?

- What knowledge and information does the organisation need to support its business, specifically around fostering innovation and improvement?
- How is knowledge shared and how does it flow across the organisation and with stakeholders?
- Who makes knowledge flow well? What makes it work?
- What are the blockages that prevent knowledge from flowing across the organisation?
- How is learning captured following a project or activity? What happens with it?
- What gaps currently exist in this knowledge?
- Are there pockets of untapped knowledge?

Work that has previously been conducted, including an independent, external knowledge audit in 2005/06 on Knowledge Management within the Centre for Healthcare Redesign Program was considered as part of the analysis process. Outcomes and results from the recent consultations and knowledge needs analysis reveal findings are similar to the results from the 2005/06 Knowledge Audit.

2.2 Results

Key themes and issues emerged from the needs analysis with commonalities across different organisations and areas of the health system.

The issues were themed into the four elements of knowledge management: People, Content, Process and Technology, recognising that some themes fall into more than one element. A summary of the issues and themes identified during the knowledge needs analysis include:

Contacts

- Knowing who to talk to is not easy to know or find - need an up to date database
- Need better ways of connecting with people / able to contact the right person.

Value of Sharing

- Many people underestimate the value/impact of their work and contribution
- Understanding the impact and benefits of sharing to others and what's in it for me?

Culture

- A culture of sharing needs to be developed – including leadership, trust & encouragement
- There is little incentive or time to share innovation/improvement projects unless for a research publication or award nominations
- There is a culture of turf guarding or holding on to knowledge in some settings
- Celebrating success and good work doesn't happen in all areas.

Resources

- Many clinicians and staff don't have good writing skills. Support to write-up work for publication may be required
- Time and workload priorities are the biggest barriers across system
- Lack of a dedicated role to support this activity makes it difficult for LHDs/SHNs

- Support is required with data analysis and evaluating outcomes
- Clinicians & Patients/Consumers are thought to be major untapped source of knowledge.

Lessons learnt

- General lack of sharing lessons across the system – especially what didn't work
- More likely to share mistakes one on one (personal conversation).

Information Overload

- Knowing where to find information is confusing and inconsistent. There is too much information and content from various sources, plus no integration of systems
- Need effective filter systems to balance information flow and avoid overload.

Integrity of Content

- Keeping content up to date is a challenge and needs improving
- Published grey literature - varies in content quality.

Project methodology

- Need standard project methodology and templates/tools to assist
- Implementation – often doesn't occur and outcomes are not always shared
- Evaluation doesn't happen in a systematic way across most areas.

Copyright /IP

- Who owns the information if added to ARCHI or ACI site (copyright)?
- Intellectual Property is a potential concern especially around Innovation.

Identifying content

- Need to identify what knowledge content is needed and what is most useful
- Need to identify areas of duplication to reduce reinventing the wheel
- Need to understand how does knowledge and research fit/work together.

ARCHI

- ARCHI is well known, but is like a static repository
- Needs more interactive / appealing presentation and content.
- It is difficult to find content and isn't a logical flow to access.
- Content isn't comprehensive and consistent enough to be of value
- Too difficult to navigate, use and find information – limits use
- Get lost in the process, there are often too many steps (click throughs) to access an article.

Awareness

- Knowing where to look for information is challenging and confusing
- There is a lack of clear process around how and where to share information
- No standard processes between different organisations / sites / purposes
- Frustration with data - where to find, how to use.

Rules and Regulations – lack of consistency

- Projects submitted for local and state quality awards are no longer routinely published on ARCHI
- Governance / Business rules are varied about what and where information should be recorded and made available.

Incentives

- There is no formalised process for when people come back from Forums / Workshops to share learning and information
- There are some tools to submit projects briefs, but often not submitted
- There is no formal process to capture lessons learnt
- Lots of great ideas locally – lack buy in to progress/process.

Inequities

- Rural/Regional areas have limited access to Internet/ limited bandwidth
- Resources / computers are limited in clinical areas

Access Issues

- Internet access is often blocked. Some areas have stricter security than others
- Speed of access to Internet is not effective
- Search functions are not efficient across health. Some have difficulty accessing Google through work
- Password access to sites can be a barrier

Integration

- There are many systems / databases but none are integrated
- Over reliance on use of emails – to the point it becomes ineffective
- Social media is not accessible/permitted in most LHD settings
- No hospital Wi-Fi to use apps on mobile devices

2.3 Opportunities

The knowledge needs analysis identified a number of key organisational and cultural aspects that will enhance the knowledge approach:

- An acknowledgement for the need to integrate and enhance knowledge sharing, work more effectively and collaboratively to share key projects and lessons learnt and reduce duplication of effort.
- An expectation that the ACI and other Pillars have an important role in integrating, supporting and facilitating knowledge sharing.
- There is a lot of great work happening across local sites, districts, networks in silos that need integration and to be shared and leveraged more widely across the health system.
- Strong support for a single 'Portal' or 'One stop Shop' to contribute and find all relevant information and knowledge resources.
- Communication of activities and projects is likely to increase awareness and encouragement for others to contribute successes.
- There are many experts and leaders with contacts that can be leveraged to enhance and position as key connectors within the system and broker key knowledge to others internally and externally.
- ARCHI is well known and acknowledged but is not regularly accessed. Many agreed there is great potential for improving ARCHI.
- ACI Networks provide a unique opportunity to enhance the flow of knowledge in specific clinical areas, to enhance their connections with people and increase and integrate their knowledge and expertise into various professional networks and local silos.
- Annual local and state-wide health awards showcase innovative practice and lessons learnt and should be shared systematically across the system.

2.4 Challenges

The knowledge analysis also identified some key challenges and barriers to knowledge sharing, including:

- Developing a culture and shared vision of collaborating and sharing across all levels of organisations, including executive, clinical and management.
- A need for a consolidated and integrated approach (across all health organisations, especially Pillars) and implementing clear processes to ensure consistency across the health system.
- A need for clear guidance and direction on what is important for Knowledge Management as a strategic priority, creating time and placing value on sharing critical information.
- Promoting a culture of value to demonstrate positive impact of work and projects. (Many people underestimate the value and impact of the work and projects they are involved in).
- Time, resources and skills to share knowledge are some of the biggest challenges in the healthcare environment.
- Equitable access (especially in regional areas) to web, broadband, IT, including certain relevant and government websites, is a major challenge.
- Communicating and demonstrating the benefit of knowledge management to everyone in the Health System and that it will ultimately provide significant benefits.
- Content management – critical/ important content needs to be identified and a process in place to review, approve, submit etc, and reduce the 'accidental' finding of information.
- Staff often experience overload or too much information with competing resources.
- Reducing and eliminating the view that previous attempts to share knowledge have not been acknowledged or appreciated.

3. SOLUTIONS

A Knowledge Solutions workshop held at Australian Technology Park in Sydney on the 17th June 2013 included 50 staff from across the Health System. At least one representative was present from each Local Health District (LHD), the NSW Ambulance Service and Sydney Children's Hospital Network.

Key themes from consultations were presented under the four knowledge elements of People, Content, Process and Technology and participants identified solutions to guide the development of an approach in each of these domains. It was widely acknowledged that overlap exists between these areas. Participants were asked to consider solutions, which would support the needs of stakeholders and enhance the way innovations and improvement initiatives are shared across the NSW health system.

The workshop delivered a high level of engagement from participants and identified solutions and ideas to help inform the knowledge approach which the ACI will lead to share innovations and lessons learned for the Health System. Emerging from the brainstorming sessions were a range of high level 'principle based' solutions as well as practical action based solutions.

A summary of the key solutions is listed below. These are categorised into the four elements of Knowledge Management - People, Content, Process and Technology. It is common that there are areas that cross over into various elements. (A full list of solutions from the Workshop is presented at Appendix 1).

3.1 People Solutions

Culture

- Set expectations and allow dedicated time for knowledge sharing and innovation
- Develop shared values and a collective culture encouraging people to share across organisational boundaries.

Executive Leadership

- Leadership must express, model and reinforce open sharing behaviour.
- Communicate and effectively share the benefits of Knowledge Management with CEs and Executives (Boards)
- Sell the benefits and successes at SEF meetings and invite leaders and CEs to contribute a couple of local projects and lessons learnt.

Knowledge leaders/champions

- Having a dedicated role of a knowledge champion/advocate in each LHD/Network to drive the approach
- Support and answer questions, to guide the process, update and ensure relevant content.
- Identify Subject Matter Experts (SMEs) or thought leaders and develop a strategy to engage, promote and involve.

Networks

- Maximise the use of existing networks at ACI, LHDs, SHNs and other Pillars
- Identify information sharers and value through Social Network Analysis (SNA)
- Promote and enhance access to networking and conferences
- Identify and leverage networks (Communities of Practice) that currently exist.

Contacts

- Implement an up to date state wide directory (phone book) of contacts across the system (including all but especially Redesign Leads, Clinical Governance Staff, Project Managers and who is undertaking and leading change).
- Establish an organisational state wide Facebook or LinkedIn (Yammer?)

Skills and training

- Develop skills of staff to enable people to share, write, listen and learn
- Include knowledge sharing activities in position descriptions, KPIs and performance appraisals
- Set an expectation that Individuals & LHDs will share knowledge as standard practice - include as KPI's, requirement of all projects, in position descriptions and performance appraisals
- Personal development plans should include sharing of knowledge and projects
- Recognise information management as a core skill in many roles.

Recognition and rewards

- Recognise and acknowledge contributions through intrinsic rewards
- Introduce a knowledge awards/rewards program
- Establish online collaboration spaces for sharing across organisational boundaries (a mix of open and closed access).

3.2 Content Solutions

Identify content

- Identify what information and content is needed and essential
 - Innovations
 - Improvement projects
 - Best practice
 - Evidence based practice and knowledge.
- Ongoing and regular environmental/horizon scanning
- Identify and reduce areas of duplication
- Include information on which organisations have used content and how (include comments or usability box).
- Establish systems so everyone is able to upload content with an 'approval' process built into system

Standardise templates

- Develop standard templates
 - Common templates and fields required for sharing and reporting innovation/improvement
 - Provide a standard template for submissions and open space for extra resources.
- Develop 'at a glance' content – ensure all projects are less than 2 pages and include contact details for more information to ensure it is easy to read and succinct.
- Write content once and write well – so it can be used for multiple purposes

Linking and rating

- Link to sites (local and international) that already have information on best practice and quality content and other intranets/websites wherever possible
- Include a rating of outcomes and results – user rating (i.e. Trip Advisor) – Click or 'Like' if this was this useful? Five star rating system?

3.3 Process Solutions

- Establish standardised process to identify and share knowledge more effectively (processes that are quick and easy and complement daily activities wherever possible rather than adding complexity to work).
- Simple submission and approval processes that are well understood
 - Develop processes and structures to support networks
 - Ensure governance processes do not inhibit the sharing of information
 - Easy to upload content
 - Central Coordination
 - Clear guidelines/processes to submit and take down information
 - Easy to follow guides to walk through processes of uploading/sharing & Frequently Asked Questions (FAQs).
- Establish process for sharing and reporting workshops and conferences.

Awards

- Establish process to ensure all quality/innovation award applications will be posted, shared in a central place/portal
- Process for local achievements to be shared on a broader state-wide basis.

Evaluation

- Evaluation to include both traditional/professional and social ('likes' on Social Media)
- Ensure outcomes are added at regular times (i.e. 6, 12, 18 & 24 months)
- Include case studies of where projects and initiatives have been trialled

Governance

- Add knowledge sharing to agenda items for meetings in LHDs, SHNs, Pillars, networks etc.
- Add sharing knowledge and information to terms of reference of relevant ACI network meetings and other relevant groups.

3.4 Technology Solutions

Single Portal

- One portal as a hub - Health wide registry of innovations
 - One page summaries added (ensure less than 2 pages)
 - Extend ARCHI contributions to include Patient Stories.

Search function and categorisation

- Efficient search function by topic, keyword, etc
 - Search engine capability to find information easily and quickly
 - Data Mining effectively by subject
 - Uploaded content must be catalogued in such a way that it can be searched easily and narrowly.
- Effective and consistent categorisation of content (by subject/topic areas).

State-wide access

- Access must be on a state-wide level so all LHDs and areas can take part
- Must have equity to access of technology across the system
- Alignment across ACI, LHDs for coordinating and communicating messages
- Remove barrier of username and password wherever possible
- Open access when on or off the system/network/site
- Remove blockage currently in place for some Government/relevant sites
- Ensure content is on Internet rather than Intranet wherever possible
- Could provide access to everyone through their payroll number
- Invest in better access particularly to Rural areas.

Accessing information

- Tag interests and/or Opt-In to receive automatic updates and notification of new content
- Link with other sites where possible - Quick links on all Intranets
- Set up the portal like a shop so the customer goes into it with an issue and 'shops' for a solution.

Expand Telehealth

- Promote TeleHealth as a learning tool.

Social Media

- Explore options for Social Media, Blogs, Twitter, Facebook
- Workplace Enterprise social media/networking site (i.e. Yammer – similar to a workplace Facebook)
- Host social networking forums
- Enhance the use of discussion forums which are already popular for some groups/teams.
- Develop an internal Health based 'Twitter'
- Collaboration spaces online where ideas/tools/documents can be worked on together
- Hosted blogs or Q&As where senior clinicians and managers can participate and respond in a timely manner
- Automatic notifications, RSS feeds for reviews, by topics of interest
- Broadcast News
- ACI – TV

4. THE APPROACH

4.1 Key Priorities

The recent needs analysis has supported and confirmed previous investigations into knowledge management across NSW Health. The Knowledge Management approach must focus on key priorities that will bring the most improvement and impact to staff, patients and stakeholders across the system.

As outlined in the Australian Standard for Knowledge Management (2005), the desired state for supporting organisational outcomes is the right mix of skilful people in conjunction with smart processes, high quality content and integrated technology to result in balancing each of the elements below as part of the knowledge approach.

People	Identifying and supporting people and networks who produce, contribute and use knowledge as a basis for making actionable operational decisions and helping to create better linkages between these people
Content	Identifying the critical knowledge that is important to the ACI and healthcare partners (Ensuring that context is not disconnected from content).
Process	Identifying operational critical areas, the knowledge associated with these areas and the decision points involved in key work processes.
Technology	Identifying the technical infrastructure and tools that enable the right knowledge to be delivered to the right people at the right time.

The approach needs to begin with identifying knowledge and standardising processes to ensure knowledge is shared effectively and duplication is reduced. Leadership is also needed to support and encourage knowledge sharing and develop a culture of learning from each other to enhance innovation and improve efficiencies and opportunities.

It is recommended the following activities be prioritised as part of the knowledge approach to be established over the next 12-24 months:

1. Establish a Knowledge Working Party with local representatives

A Knowledge Working Group or Steering Committee including representatives from each healthcare organisation is required to support and drive the state-wide knowledge approach.

It is recommended that this group includes the previously nominated ARCHI Content Representatives, with close links to work with Local Redesign Leads, Clinical Governance staff and Librarians to share knowledge effectively across the NSW Health system.

This group will help to facilitate knowledge sharing about innovation and improvement on a regular basis and assist in developing specific activities to promote sharing projects, stories, achievements and lessons learnt about.

2. Leadership to support and encourage a culture of knowledge sharing and learning

Strong Executive Leadership is needed to support and encourage knowledge sharing and develop a culture of learning from each other to enhance innovation and improve efficiencies and opportunities.

As a key priority for the knowledge approach to progress, it is important to deliver a consistent understanding of the communications 'message' and create a shared vision that will promote and influence sharing and knowledge outcomes for the ACI and health partners.

This activity includes:

- Establishing a clear vision - including promoting the benefits a knowledge approach will bring to individual organisations and the state wide health system
- Available and dedicated resources in each organisation to drive locally, including a subcommittee or community of practice for knowledge champions/leaders with representatives from each Health Care organisation
- Engaging commitment and support from senior management (including Chief Executives) across all NSW Health Organisations
- Developing and implementing a communications campaign informing staff of the benefits and what is expected – such as participation and contribution
- Developing and implementing education/marketing campaign to inform staff and guide development across all levels of the health system.

3. Identify and map key content (Identify, Create, Store, Share, Use content)

Establish and integrate an effective content management process to identify key knowledge required by stakeholders and to create and store it effectively for use and re-use.

This activity should include a regular environmental scan of local, interstate and international knowledge to tap, leverage and link with other relevant work happening in the healthcare sector.

Content management should be conducted in conjunction with the ACI website redesign to ensure current and future content is up to date and matches the needs of users.

A content review of ARCHI has been conducted and local organisations have nominated contacts for reviewing content on ARCHI. Local content leads/contacts are recommended to be on the Knowledge Working Group and will need to assist in providing local content in a systematic way.

Content mapping helps to discover:

- What content is currently available in various places and how it is organised?
- What pages are most/least popular
- What information is most often requested
- Identifies type of information we should be highlighting
- Where are there gaps in content?
- How often should content be updated
- Where is there duplication, and where can this be reduced?
- Who can update what content
- How can content be reused?

Content should be categorised and themed into key topic/subject areas to ensure that search function is effective and user friendly.

4. Establish clear processes for sharing content

Establish clear processes for approving and uploading content on a regular basis. For example, local health and innovation award nominations already go through a rigorous assessment process. Establish processes so that local award processes can be shared on a state-wide basis.

The Centre for Healthcare Redesign School projects also need to be added and other identification processes for documenting and sharing key content need to be established and formalised as a priority.

5. Supporting ACI to become a learning organisation and share lessons learnt

Develop key strategies and activities to enhance the sharing of insights and lessons learnt across ACI portfolios and networks.

This may include hosting a number of knowledge cafes about specific themes and topics, holding lunch and learn sessions around major projects and initiatives, and interviewing Network Managers and staff of the ACI to capture lessons and publish either online or in a newsletter (could be anonymous or network specific questions and answers interview).

This may include formalising a process for after action reviews, and writing up regular question and answers (Q&A's) to be shared in a section on the Intranet or Internet. While this is focussed on ACI Networks initially, the methods used can be shared with LHDs and other Health Organisations to broaden the scope of this activity over time.

6. Pilot knowledge sharing activities with a small number of ACI Networks

Networks are considered a major enabler for knowledge management and existing ACI Networks provide an opportunity to leverage knowledge sharing across groups of people with shared interest or expertise in a particular area of health. Extensive conversations, interactions and discussions occur within networks encouraging knowledge to surface and flow.

ACI Networks are led by Co-Chairs (credible clinical leaders in their field) and this provides the opportunity to identify experts in a specific domain.

The solutions workshop suggested that a pilot be set up to trial some key priority areas and networks to target some knowledge initiatives and activities and test their effectiveness.

It is recommended the ACI chooses one or two networks to trial/pilot some knowledge activities/initiatives, and enhance the sharing of information through these networks. After action reviews and lessons learnt can be documented and shared more broadly to identify aspects that work well or could be amended or improved and enhance communications across and between networks.

A knowledge sharing strategy is also proposed to support the CHR Graduation days and package project information for sharing more broadly.

The outcomes of this trial/pilot can inform a roll out more broadly across all ACI Networks and the broader health system.

7. A central 'one-stop' Knowledge Exchange

A central 'one-stop' Knowledge Exchange needs to be developed in conjunction with the redesign of the ACI website and ARCHI review and in consultation with LHD's, SHNs and Pillars to establish a central place for valuable online resources for all the Health services in NSW.

The Portal should include resources such as:

- A single place for all innovation and improvement projects
- Toolkits and resources (templates, checklists etc) for specific topics
- Links to international and other state/industry sites and stories
- Collaboration spaces such as blogs, comments and discussion forums
- Best practice guidelines and models of care
- Upcoming events and networking opportunities
- A newsletter and regular communications (snapshot / updates)
- Lessons learnt section
- A place to profile experts and leaders on key issues
- Social media stream for Twitter feeds and other relevant news items.

The portal needs sophisticated and efficient content management systems and highly effective search functions, combined with collaborative tools to integrate information across organisational boundaries and with key partners.

The ACI is currently undertaking a review of its website and ARCHI which will inform and help to guide the central portal approach.

8. Explore activities and maximise opportunities to promote knowledge sharing across borders and organisations.

Identify and plan new ways and methods of sharing innovations and improvements, both small and large scale across organisational/network borders.

This could include knowledge and capability days with several LHD/s and organisations to showcase local improvements and lessons learnt or stories in local newsletters about what's happening across the border in another LHD.

9. Establish evaluation and measurement

A survey could be carried out to obtain broad overviews and quantitative data of staff perceptions to identify where the organisation is now in terms of knowledge management and benchmark against future progress.

A review of the knowledge approach (knowledge analysis) should be carried out every 2 years to ensure the approach is effective and aligned with priorities and needs of stakeholders.

10. Scope the interest and feasibility in establishing a Community of Practice (CoP) around Knowledge

Scope the interest over the next six months or so in establishing an informal Community of Practice (CoP) for anyone to join with an interest in knowledge sharing and knowledge management in public healthcare.

11. Work with HealthShare NSW and other organisations to improve equity and access to Internet and online resources

Technology is one of the biggest challenges as key partners and Local Health Districts currently have varying degrees of access to the Internet. Email and computer access for some staff members is limited, in local hospital settings particularly in rural and regional areas.

As part of the knowledge approach the ACI should discuss options and possibilities with HealthShare NSW to enhance and encourage improved access to the Internet and online resources across the state.

Examine the possibility with HealthShare NSW and Human Resources whether a centralised up to date contact database for the state-wide health system could be linked to the new centralised payroll system, StaffLink.

4.2 Action Plan and Next Steps

An Action Plan has been developed to address the recommended solutions and articulate clear actions and next steps in more detail, which includes starting with:

1. Establish a Knowledge Working Group including representatives from each Health organisation to partner with ACI to develop and implement the approach
2. Develop a communication plan to promote a shared vision and culture that will encourage sharing and influence knowledge outcomes
3. Invite Chief Executives to support and work with the ACI to understand the benefits of contributing to a holistic state-wide knowledge approach
4. Establish evaluation and monitoring of the knowledge management approach
5. Begin implementing other activities as part of the Knowledge Approach.

5. REFERENCES

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APPENDIX 1: Solutions identified by staff at the solution workshop

People and Culture Solutions

- Develop shared values and a collective culture encouraging people to share across organisational boundaries
- Set expectations and allow dedicated time for knowledge sharing and innovation
- Leadership must express, model and reinforce open sharing behaviour.
- Having a dedicated role of a knowledge champion/ advocate or broker in each organisation to drive the approach and be a point of contact
- Maximise the use of existing networks at ACI, LHDs, SHNs and other Pillars
- Promote and enhance access to networking and conferences
- Implement an up to date state wide directory (phone book) of contacts across the system (including all but especially Redesign Leads, Clinical Governance staff, Project Managers and who is undertaking and leading change).
- Establish an organisational state wide Facebook or LinkedIn (Yammer?)
- Develop skills of staff to enable people to share, write, listen and learn
- Recognise and acknowledge contributions through intrinsic rewards
- Introduce a knowledge awards/rewards program
- Include knowledge sharing activities in position descriptions, KPIs and performance appraisals
- Identify Subject Matter Experts (SMEs) or Sages/ thought leaders and develop a strategy to engage and involve (eg. Chris Ham, CE of Kings Fund on social media, blogs, twitter, multimedia, comments, etc.)
- Identify information sharers through Social Network Analysis (SNA)
- Educate CEs and Executives (Boards) on the benefits of KM
- Invite leaders and CEs to contribute 3 projects and lessons learnt

- Sell the benefits and successes at SEF meetings
- Identify and leverage networks (Communities of Practice) that currently exist
- Establish online collaboration spaces for sharing across organisational boundaries (a mix of open and closed access).

Content Solutions

- Standardise templates (makes it easier but can also inhibit innovation & creativity)
- 'At a glance ' Content – ensure all projects are less than 2 pages + contact details for more information to ensure it is easy to read, accessible and succinct.
- Write once – for use many times, and multiple purposes
- Identify what information and content is needed
 - Best practice
 - Evidence based practice and knowledge
 - Innovations
 - Improvement projects.
- Include information on which other organisations have used it and how (include comments or usability box).
- Anyone can access and upload content, but needs an 'approval' process built into system
- New formats such as YouTube
- Linking content to/ and from other sites wherever possible
- Ensure outcomes are added at regular times (ie. 6, 12, 18 & 24 months)
- Environmental/horizon scanning
- Effective categorisation
- Evaluation – can be both social (i.e. likes on Social Media) and scientific/standard/professional
- Identify areas of duplication and reduce
- "Portal" or gateway – needs effective categorisation and user friendly subject/topic areas
- Link to sites (local and international) that already have information on best practice and quality content

- Rating of outcomes and results – self rating /user rating (i.e. Trip Advisor) – Was this useful? (click) or Like (click), 5 stars?
- Include case studies of where projects and initiatives have been trialled.

Process Solutions

- Establish processes that are streamlined, consistent, standardised and linked with daily Business
- Expectation that Individuals & LHDs will share knowledge as standard practice - include as KPI's, requirement of all projects, in position descriptions and performance appraisals
 - Personal development plans should include sharing of knowledge and projects
 - Recognise information management as a core skill in many roles
 - Expectation and process to ensure all quality/ innovation awards applications will be posted, shared.
- Develop standard templates – for all Pillars, MoH and LHDs
 - Common templates and fields required for reporting innovation/improvement
 - Provide a standard template for submissions and open space for extra resources
- Local, LHD, Network dedicated owner to support locally, to answer questions, to guide the process, update content and ensure relevant
- Fast and Easy submission and approval processes that are well known.
 - Develop processes and structures to support networks (not didactic).
 - Ensure governance processes do not inhibit the sharing of information
 - Easy to upload content
 - Central Coordination
 - Clear guidelines/processes to submit and take down information
- Establish process for sharing and reporting workshops and conferences
- Tag interests and/or Opt-In to receive automatic updates and notification of new content
- Easy to follow guides to walk through processes of uploading/sharing & FAQs

- Link with other sites where possible - Quick links on all Intranets
- Set up the portal like a shop so the customer goes into it with an issue and 'shops' for a solution
- Add knowledge sharing to agenda items for meetings in all LHDs, SHNs, Pillars, Networks etc.
- Add sharing knowledge and information to terms of reference.

Technology Solutions

- Single central repository / one portal as a hub - Health wide registry of innovations
 - One page summaries added to ARCHI (ensure less than 2 pages)
 - Extend ARCHI contributions to include Patient Stories
 - Efficient search function by topic, keyword, etc
 - Search engine capability to find info easily and quickly
 - Data Mining effectively by subject
 - Uploaded content must be catalogued in such a way that it can be searched easily and narrowly.
- State-wide access
 - Must be on a state-wide level from NSW Health so all LHDs and areas can take part
 - Must have equity across the system
 - Alignment across ACI, LHDs for coordinating and communicating messages
 - Remove barrier of username and password wherever possible
 - Open access when on or off the system/network/ site
 - Remove blockage currently in place for some Government/relevant sites
 - Ensure all content is on Internet rather than Intranet
 - Could provide access to everyone through their payroll number (HSS?)
 - Invest in better access particularly to Rural areas
- Expanding Telehealth
 - Promote TeleHealth as a learning tool
 - Use video conferencing from the boardroom to desktop advice

- Social Media, Blogs, Twitter, Facebook,
 - Workplace Enterprise social media/networking site (i.e. Yammer – similar to a workplace Facebook)
 - Host social networking forums
 - Enhance the use of discussion forums which are already popular for some groups/teams
 - Develop an internal Health based 'Twitter'
 - Collaboration spaces online where ideas/tools/ documents can be worked on together
 - Hosted blogs or Q&As where senior clinicians and managers can participate and respond in a timely manner
 - Smart phone Apps
 - Self moderated discussion forums to receive information
 - Automatic notifications for reviews, by topics of interest
 - Broadcast News
 - ACI – TV.
- Software/Tools
 - (Apps) ie. An ARCHI App, an ACI App and for specific topic areas (ED, Surgery etc)
 - Cloud technology
 - ListServ's
 - More access and use of podcasts
 - Different methods for broadcasting - podcasts, radio etc
 - Text message directing people to updates
 - LinkedIn – a significant % of Health employees already on LinkedIn
 - Searchable databases
 - Existing technology and programs are currently underused, such as TRIM
 - Setting up collaboration spaces – open online spaces for sharing across organisational boundaries (mix of open and closed access).
- Training people to be able to use technology and appropriate use of Social Media.

APPENDIX 2: Knowledge Solution Design Workshop Attendees

ATTENDEES	LHD	POSITION
Kay Babalis	Sydney Children's Hospital Network (SCHN)	Service Improvement Officer - Sydney Children's Hospital
Jane Bowen Jones	Western NSW LHD	Clinical Governance - Western NSW LHD
Kim Brookes	South Eastern Sydney LHD	Governance SESLHD
Barbye Castillo	Sydney LHD	Redesign Leader
Margaret Chapman	South Western Sydney LHD	Redesign Leader
Lorna Dicks	Western NSW LHD	Redesign and Innovation Western NSW LHD
James Dunne	Agency for Clinical Innovation	Implementation Program Manager
Carla Edwards	Western Sydney LHD	Redesign Leader
Maeve Eikli	Agency for Clinical Innovation	Director, Engagement, Executive Support & Communication
Charlie Farah	Sydney LHD	Manager, Performance Monitoring, Casemix and Innovation
Linda Green	Nepean Blue Mountains LHD	Nepean Blue Mountains LHD - Redesign
Sue Hair	Northern Sydney LHD	DON at Manly Hospital, Northern Sydney LHD
Judith Hallam	Southern NSW LHD	Redesign Leader
Rebecca Hamilton	Baxter Healthcare	Operational Excellence Manager
Liz Hay	Agency for Clinical Innovation	Health Economics & Analysis Manager
Lynn Hopkinson	North Coast LHD	DDON at Lismore Base Hospital
Natalie Irwin	Central Coast LHD	Redesign Leader
Lea Kirkwood	Agency for Clinical Innovation	Centre for Healthcare Redesign Program Manager
Andrea Lock	St Vincent's Hospital	Clinical Redesign – St Vincent's
Sheree Lloyd	Northern NSW LHD	Project Officer Patient Journey Project
Ryan Lovett	Ambulance Service NSW	Operational Support Manager Ambulance Service
Nigel Lyons	Agency for Clinical Innovation	Chief Executive
Estelle Marque	Agency for Clinical Innovation	CHR Project Officer
Liz Mason	South Eastern Sydney LHD	Redesign Leader
Peter McLeod	Agency for Clinical Innovation	Web Manager
Greg Mullen	Far West LHD	Clinical Redesign and Innovation
Anna Nicholes	Agency for Clinical Innovation	Knowledge Manager
Bronwyn Paton	Murrumbidgee LHD	Redesign Leader
Julia Philips	Northern Sydney LHD	NSLHD Library service manager
Radhika Rao	Agency for Clinical Innovation	Centre for Healthcare Redesign Support Officer

ATTENDEES	LHD	POSITION
Ellen Rawstron	Agency for Clinical Innovation	Manager, Anaesthesia & Perioperative Care Network
Dwight Robertson	Agency for Clinical Innovation	Emergency Care Institute Nursing Project Officer
Kaye Rolls	Agency for Clinical Innovation	Intensive Care Coordination and Monitoring Unit, Knowledge Manager
Anna Rozario	Ambulance Service NSW	Redesign Leader
Rima Singh	Agency for Clinical Innovation	Patient and Staff Experience Project Officer
Alex Smeaton	Illawarra Shoalhaven LHD	Clinical Systems Manager, ISLHD
Jacqui Smith	South Western Sydney LHD	District Librarian SWSLHD
Graeme Still	Agency for Clinical Innovation	Manager, Blood & Marrow Transplant Network
Murray Stone	Clinical Excellence Commission	Corporate Governance and Reporting Officer
Robyn Stubbs	Baxter Healthcare	Operational Excellence Manager
Tracey Tay	Hunter New England LHD and Agency for Clinical Innovation	Senior Staff Specialist / Clinical Lead
Lucy Thompson	Agency for Clinical Innovation	Patient and Staff Experience Manager
Andrew Toomey	Mid North Coast LHD	Knowledge Management Program Manager
Raj Verma	Agency for Clinical Innovation	Director, Clinical Program Design and Implementation
Rob Wilkins	Agency for Clinical Innovation	Palliative Care Network Manager
Zena Wilson	Nepean Blue Mountains LHD	Nepean Blue Mountains LHD - Redesign
Mark Zacka	South Western Sydney LHD	Director Clinical Governance – SWSLHD LHD

APPENDIX 3: Knowledge Solution Design Workshop Feedback

Of those who attended the solution design workshop and provided feedback, 100% of people said the workshop provided an excellent or good opportunity to provide input and contribute.

“A very good, involving workshop.”

“It would be good to be provided with a list of attendees, their positions, organisations & contact info.”

100% of participants said the content of presentations was relevant and useful.

“Presentations were good and tied the content back to everyday health related issues.”

80% of people said they found the workshop session a valuable way to provide input and contribute

“As grappling with the concept of knowledge management is in its early stages, I think it was a useful approach.”

“Picked up some great ideas.”

“Enjoyed meeting new people from the LHDs - new contacts in the phone!”

Which aspects of the workshop did you find most valuable?

“It’s useful & enriching to any project to have the input of others with varying roles & perspectives.”

“Networking, hearing what other people and LHDs are doing.”

“The opportunity to network with other service areas and understand difficulties experienced by others was valuable. Learning the approach of the Children’s Hospital outlining the highs and the lows and their experiences learnt.”

“Networking and the Presentation from consultations were valuable.”

Which aspects of the workshop did you find least valuable?

“There was a lot of discussion around infrastructure technology and capability which was not discussed or addressed. However, important in terms of context and progress.”

“The group discussion sessions were, at times, frustrating. Strongest voices get heard.”

Suggestions for improving the workshop in the future.

“Look at how other areas of business achieve such requirements (non-government sectors).”

What are the ways we can maximise the outcomes of the workshop?

“Keep the momentum up - follow up with a further workshop once you have looked at some of the suggested solutions - develop a working plan.”

“Try and identify the key priorities and implement some practical solutions.”

“It may be good to have media relations experts involved from various organisations.”

“Decide on some key themes (might also help with defining the scope) - engage the Chief Executives by briefing them as to the aim/wishlist - engage the IT systems people to establish feasibility of State-wide approach to ‘knowledge management’ - what can be done realistically.”

“Plan of action - we need to come away with practical tangible actions/next steps that we can report back to our respective LHDs.”

“Feedback from the day, the outcomes - would be very nice to hear what the ACI got out of this.”

“Keep communication going.”

“Discuss outcomes and potential solutions with HealthShare NSW.”

“Enabling further creativity in ideas and transforming ideas into practise.”



