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# An Experience-Based Knowledge Management Approach to Healthcare Quality Improvement

By:

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*"Simply put, health care quality is getting the right care to the right patient at the right time – every time" (Dr. Carolyn Clancy, 2009)*

## Learning from Organizational Experiences

Knowledge Management (KM) has many practical applications and operational facets that derive from a common and reusable set of basic principles. The specific application of KM differs from one industry to another, depending on the operational problems being addressed, the nature of the stakeholders, and the environment in which the methods are used. One effective application of KM in healthcare is the use of a lessons learned process to capture essential elements of clinician and other stakeholder experiences, formulate lessons that are reusable, and assist in replicating effective practices and avoiding known pitfalls.

Effectively implemented lessons learned processes support organizational learning and increase efficiency and effectiveness of clinical operations by reducing repetition of operational mistakes, increasing organizational diffusion of effective practices and innovations, and increasing standardization. (1)

Effective lessons learned processes are:

- Built into project templates as a required and continuous activity
- Supported by leadership and the organizational culture
- Based on an evidence-based, blameless, and systematic process

In this whitepaper, we look closer at a particular aspect of the KM lessons learned process and examine how the process is rooted in stakeholder experience, especially those of the front-line clinicians involved.

## Benefits

Achieving healthcare quality requires focusing improvement efforts on the things that matter and ensuring the three basic dimensions of healthcare quality – structure, process, and outcome (2) – are addressed in terms of their relevancy to the organizational mission and goals. Too many quality improvement efforts fail to realize anticipated results because they are too diffuse, are not tied to specific organizational goals, or do not address real risks, issues, and situations experienced by the organization. If a process-improvement effort is aimed at an operation that is not at risk and is unlikely to inhibit achievement of the organization's goals, then the effort, itself, is a form of waste. Likewise, if the focus is on risks and issues not pertinent to the organization's goals, then it is also a wasted effort.

Basing the lessons learned methodology on critical stakeholder experiences results in several benefits:

- *Increased validity:* Lessons derived from critical stakeholders involved in a project or process result in knowledge that is relevant. Such lessons address risks, issues, and situations that are directly related to the achievement of quality.

- *Increased salience:* Lessons that use critical stakeholder experiences resonate with stakeholders, are more likely to capture the attention of a busy workforce, and are more likely to be adopted. Grounding lessons in critical stakeholder experiences ensures that they are meaningful and relevant to stakeholders' lives.
- *Increased value:* Basing lessons on critical stakeholder real-world experiences creates value by reducing waste and risk in the value chains that matter to the organization and stakeholders involved.

Best Practices	Organizational Impact
<ul style="list-style-type: none"> <li>❖ Build lessons at the project level by capturing significant experiences of critical stakeholders</li> <li>❖ Focus on experiences that relate to risks, issues, and situations that impact or threaten key organizational goals</li> <li>❖ Develop additional analysis methods, such as surveys and benefit measures, based on topics and issues discovered through the lessons learned process</li> </ul>	<ul style="list-style-type: none"> <li>❖ Capturing at the detail level ensures tactical and strategic lessons are based on specific stakeholder experiences and support improved decision-making</li> <li>❖ Driving improvement in areas that are critical to organizational success increases organizational effectiveness</li> <li>❖ Monitoring and improvement efforts are tightly coupled to risks, issues, and situations that are relevant to the organization</li> </ul>

## The Experience-Based Method

The experience-based method developed at Whitney, Bradley, and Brown, Inc. (WBB) uses in-depth interviews with critical stakeholders to capture details of effective and ineffective practices, the related context, and the outcomes. The core components of the method include:

- Identification of critical stakeholders
- In-depth interviews of critical stakeholders using a framework of relatedness
- Analysis and synthesis of the resulting materials to construct lessons

The core of the WBB method is using critical stakeholder in-depth interviews to identify topics and to collect specific facts and contexts related to their experiences. Best practices in interviewee selection and interviewing methods include identifying the right stakeholders and capturing appropriate experiences that can be used to form lessons that are pertinent to, and effective in, improving healthcare quality. As such, methods reflect best practices in qualitative data collection and analysis.

Identifying suitable interviewees is a crucial step in developing lessons, and selecting individuals should be based on their relationships to organizational value chains. Thus, effective sampling is accomplished by analyzing the roles involved in the administrative and clinical processes that lie in critical value chains. Additional

interviewees are identified by means of key-informant and subject-driven sampling (3) (4) from the role-based interviewee sample frame. (5) The use of combined sampling methodologies reduces the likelihood that any specific role will be under-sampled, minimizes unexplored “hidden populations” of stakeholders, and avoids inclusion of material that is unrelated to the value chain.

WBB KM experts conduct interviews in a specific healthcare environment according to a framework of relatedness. (6)

- *Healthcare Environment:* Confined to risks, issues, and situations related to Health Information Technology (IT), clinical workflow, administrative workflow, and related elements such as staffing, training, and project management.
- *Organizational Objectives:* The potential or actual effect on organizational goals and the extent to which a risk, issue, situation, or opportunity relates to achieving or missing the organization’s goals.
- *Effectiveness:* Relative effectiveness of different approaches, products, and policies with regard to achieving organizational goals. Focuses on what the stakeholder found to be particularly effective (something to be replicated), ineffective, or perceived as a risk.

A critical aspect of experience-based interviewing is to avoid leading participants down a preferred path and to rather encourage them to articulate risks, issues, and situations they experienced within the confines of the framework of relatedness described above. While the interviewer may have specific topics in mind, these are notated on a list of intended topics rather than using them to drive participants down a particular path that may or may not be appropriate. (7)

Forcing the participant to recount experiences according to a fixed list of questions or topics will inevitably lead to sub-optimal results in three distinct areas:

1. The participant may fail to recount instances that are highly pertinent and critical to the objective if they are not in the list of pre-arranged questions or topics. This can result in wasted exploration of trivial or irrelevant topic areas and leaving important and relevant topics unexplored.
2. Participants seldom remember experiences in a strict linear order. They tend to remember as they relate to their experiences rather than to the interviewer’s list. Trying to force them away from this natural mode of recall results in participant frustration and fatigue, and inhibits cooperation and recall.
3. Forcing a topic or question introduces a risk of bias and increases the likelihood that potential lessons will reflect the interviewer’s pre-conceived ideas, rather than reflecting the critical stakeholder’s voice.

Nevertheless, it is important that the interviewer prepares a topic framework and a list of questions to use as a guideline of expected areas that may be addressed<sup>1</sup> (7). The interviewer privately takes note of the areas the participant speaks to. If topics are left uncovered, the interviewer has the opportunity to pursue additional questions after the natural recollection process has run its course. The most effective process proceeds from the general and participant-led recollection stage to the potential interviewer-led probe of unattended items.

Following this process enhances the interviewer's ability to avoid bias and to extract categories and topics that are of interest to the stakeholder, and which stand out and resonate with them. The process is grounded on a basis of trust in the participant as a critical stakeholder to identify areas of concern that are current, past, and potential. By placing relevancy in the hands of the critical stakeholder, the process leverages their experience of situations and issues, their cognition of risks, situations they successfully avoided, or near misses that may have been unanticipated prior to materializing.

WBB KM experts code the risks, issues, situations, and opportunities into categories using computer-assisted qualitative data analysis software (CAQDAS<sup>2</sup>) before being synthesized into lessons, based on criteria of reliability, validity, and plausibility. The coding process follows a mixed-methods framework developed to suit healthcare environments. The approach applies a grounded-theory methodology to identify novel and unexpected risks, issues, and situations, and a coding taxonomy that has been developed through continuous refinement during previous healthcare engagements.

## Summary

Lessons based on critical stakeholder experiences in projects and processes can be used to reduce risk, decrease waste, and increase quality. In addition, giving voice to the stakeholder through lessons increases collaboration and adoption. From its experience as a leading service organization in the healthcare industry, WBB has observed that failure to incorporate stakeholder experiences into Health IT and clinical project quality improvement efforts results in increased costs and lowered effectiveness. Applying rigorous lessons learned programs that capture stakeholder experiences enables healthcare organizations to achieve rapid organizational learning, improved outcomes in Health IT and clinical projects, and greater return on investment.

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<sup>1</sup> An example of such a framework and topic list is provided as Appendix 1.

<sup>2</sup> Examples of commercial CAQDAS systems include MaxQDA, Nvivo, QDAMiner, and ATLAS. The author is using MaxQDA.

## References

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## Appendix 1 Topic Area Example

The following reflects an example of topic areas related to Health IT deployment, covering all stages from acquisition to sustainment. Specific topics will vary from one project to another and between organizations and industries.

- Acquisition
  - Requirements and Business Case
  - Budgeting
  - Request for Proposal
  - Selection
  - Contracting
  - Purchasing
- Project Management
  - Team Structure
  - Resource Continuity
  - Scheduling
  - Change Management and Communication
- Functional and Architectural Design
  - Standard Terminology and Units of Measure
  - Scalability and Performance
  - Configuration and Customization
- Training
  - Planning and Development
  - Scheduling and Length
  - Content
  - Delivery
  - Post-training Support/Exercises
- Testing and Go-Live
  - VHA Support
  - Vendor Support
  - Change Control
  - Workload
- Metrics and Key Performance Indicators (KPIs)
  - KPIs Used New and Old
  - KPI Movements
  - Attribution of Cause
- Sustainment
  - Transition to “Normal”
  - Ongoing Support
  - User Adoption
  - User Support
    - T0 – User Self Help
    - T1 – Helpdesk
    - T2 – Functional Support
    - T3 – Defect Support
    - T4 – Enhancements and Customization
- Product Issues and Defects
  - Current
  - Historical



### About the Author

#### **Matthew H. Loxton**

Mr. Loxton is a certified knowledge management practitioner with extensive international experience in putting knowledge to work in achieving organizational goals. He has served in senior, global KM roles in the US and Australia, and holds a master's degree in knowledge management from the University of Canberra. Matthew is a peer reviewer for the international journal of Knowledge Management Research and Practice, and has written numerous KM articles for various publications on customer service, analytics, and knowledge management.



Mr. Loxton's pro bono roles have included KM and IT governance support for the Queensland Emergency Medicine Research Foundation (QEMRF) and the St. Andrew's Medical Research Institute (SAMI).

Mr. Loxton currently works at Whitney, Bradley, and Brown as a senior analyst for knowledge management in healthcare, contracting to the Veterans Health Administration (VHA), and he regularly blogs on knowledge management and organizational learning – see <http://mloxton.wordpress.com>.

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### About WBB

WBB is a leading government and public sector solutions provider, dedicated to the enduring success of our clients. We focus on value creation through customer collaboration, domain expertise, tailored methodologies, and innovative solutions. Our goal is simple: establish clients for life through passion, integrity, innovation and quality. We are honored to serve Defense, Intelligence, Homeland Security, Health, Commercial, and Civilian agencies.