

Building accountability and trust into healthcare risk management

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Accountability in healthcare requires developing a transparent link between activity and outcome, for both normal operations and improvement. The Access Risk Knowledge platform addresses this problem through data analysis, Socio-Technical Systems Analysis, managing the risk in change, and a strategic synthesis of knowledge from many projects. This paper addresses the initial challenges of implementing a data-rich technology platform to achieve a trustworthy and accountable system of risk governance. The platform was deployed in a large teaching hospital in two stages: Stage 1 established the importance and feasibility of a more comprehensive risk based approach to environment hygiene assessment. In Stage 2 a data map of 110 metrics currently in use to measure and monitor the risk of healthcare associated infection was presented at two stakeholder workshops that reinforced the value of understanding the complexity of the data and led to the formulation of questions to interrogate the data. While Stage 1 built trust locally, Stage 2 engaged stakeholders to identify organizational needs. This will lead to the implementation of specific projects that will combine to form a trustworthy accountable risk management system.

Keywords: Healthcare risk management; accountability; trust

1. Introduction

In healthcare accountability can be defined in terms developing a transparent link between activity and outcome (HIQA, 2012). Efficiency and safety also imply being able to improve operations in a coherent and sustainable way. There is well documented difficulty in sustaining improvement (e.g. Braithwaite et al 2018). Addressing these fundamental problems requires a system that delivers trust that the operational reality is properly understood and managed, as well as accountability for implementing effective improvement and change. Building accountability and trust requires a system that links and integrates a wide range of operational data including resource inputs, processes and outcomes; it should support a coherent Socio-technical systems analysis (STSA) and apply this to the full improvement project life-cycle, addressing the risk in the change process itself; it should feed a strategic capability through the management and synthesis of multiple projects; and through this should build a systemic knowledge base covering both the specific risk domain as well as more general issues of implementation of improvement. The Access Risk Knowledge (ARK) platform is a prototype risk management application that covers all these characteristics (McDonald et al 2021). We have elaborated and applied a model of trust to assessing the development potential of the ARK

platform in terms of its capacity to manage evidence, the governance of data, and the quality of engagement with users (Vining et al 2022). This paper deals with the application of the platform to address strategically important operational risks and propose effective solutions, ensuring viable and reliable implementation pathways; which will generate a compelling mutual Obligation to Act (McDonald et al 2019) to achieve the value projected.

2. Methods

The ARK platform was deployed in a large 1000 bed acute teaching hospital with members of the Quality and Safety Improvement Directorate (QSID) (n=6); members of the hospitals Prevention and Control of Healthcare Associated Infections (PCHCAI) programme (representing Occupational Health, Infection Prevention and Control, Nursing Practice Development, Microbiology, Clinical Director (n=7) and staff from the hospitals Business Intelligence Unit (BIU) (n=2). There were two stages to deployment. Stage 1 involved a trial of the platform to support the implementation of a more comprehensive risk based approach to environment hygiene assessment. Stage 2 saw the expansion of the project to enhance and improve the collection and use of PCHCAI information and data across the hospital. The study was approved by the SJH/TUH Joint Research Ethics Committee (0291 -24 July 2021).

3. Results

During stage 1 using the ARK platform facilitated sharing of tacit knowledge using the built in STSA framework and prompts. This led to supporting interventions in relation to environment hygiene assessment that targeted different aspects of the STSA and a greater understanding of the complexity of PCHCAI and the extent of the data that is captured in relation to PCHCAI.

Because of the ARK project and interaction with the ARK project team, knowledge was brought back into the hospital on the importance of data mapping, data governance, the possibility of big data analytics, understanding risk data in relation to operational data and the possibility of AI analysis on large amounts of data. Stage 2 thus led to the creation of a data map of the 110 metrics currently being used to measure and monitor the PCHCAI. Two stakeholder workshops were held with the PCHCAI programme members. The first workshop focused on validating the data map. PCHCAI metrics were mapped along dimensions of data governance (e.g. purpose of the metric; type of metric; owner; reporting; tools for gathering, analysing and reporting the data; benchmarks and regulatory basis of the data. The second stakeholder session focussed on exploring what type of interrogations do we need to ask of the data to give us the answers that are most beneficial to the organisation e.g.

- (i) can the routinely collected clinical and infection data predict patient outcomes and process outcomes (e.g. bed utilisation).
- (ii) Does a screening programme for one type of infection (Carbapenemase-Producing Enterobacterales) impact on patient outcomes and process outcomes.

These questions will be answered in the next phase of the project. This is the type of data that will support acting on it thus ensuring obligation to act.

4. Discussion

Stage 1 concerned building trust locally, posing the following questions: Does deployment of the platform address the right issues? Does it support productive engagement? Stage 2 broadened the issues to include a wider range of data addressing organisational needs. These are necessary first steps towards building an effective end-to-end project sequence around the Obligation to Act

concept and in turn building a fully accountable system. Thus from these two stages we established the preconditions for developing a trustworthy accountable risk management system: data is secure and linked for analysis; STSA engages people in sharing their often implicit knowledge in a coherent way; Semantic AI facilitates the building of and access to a growing knowledge network; synthesis of multiple improvement projects begins to develop an evidence base for both policy and guidance. The next stage in the study will be critical - establishing a clear obligation to act around well-defined organizational priorities; following this through to verification of outcomes; understanding how to manage the risk in change. Repeating this again and again will build a genuinely accountable and trustworthy system: Accountable to different stakeholders, because the values of those stakeholders can be built into the data that is processed, linked to the actions taken, giving new meaning to reporting relationships. Trustworthy because it provides evidence of delivery, through a transparent management system that enables engagement by all those involved. This has the potential to break through the stasis of a healthcare system that is difficult to change.

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