Forging a link between industry and academia

Assessing the level of adoption of quality improvement tools in selected public hospitals in Namibia

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Abstract

The purpose of this study was to assess the level of adoption of quality improvement tools in selected public hospitals in Namibia. In addition, the study also sought to develop a conceptual framework/model for adopting/implementing and maintaining quality improvement (QI) tools in public hospitals in the country.

The main finding of this study was that there is a limited/low level of adoption of QI tools and practices in public hospitals, pointing to an imperative need for education and training to bring the hospitals' leadership, management and staff to sufficient knowledge of QI tools and practices for improving the quality of healthcare services systems/processes.

Current quality practices are inclined towards basic quality control of clinical functions in Namibia. Critical success factors which promote a QI conducive environment are also not well comprehended. It was also found that the public hospitals in Namibia have no formal accreditation due to limited funds and other resources.

Furthermore, leadership style was found to be the leading barrier in the non-adoption of QI tools in Namibia. Rightly so because the current governance whereby the clinical functions, budget and infrastructure are under different ministries with inherently interconnected responsibilities makes the system cumbersome, disjointed, and inefficient.

Introduction

The application of quality improvement tools has become a topical subject among researchers and practitioners in healthcare. Several hospitals globally; both private and public have embraced the quality initiatives and strategies that have overseen the post-World War II manufacturing industrial revolution (Deming, 1986; Berwick et al., 2002).

While modern approaches to improving quality has been widely adopted globally, their appropriateness for resource poor settings has received little attention and their adoption remains sporadic. (Leatherman, Timothy, Berwick, & Nigel, 2010).

Though many African health systems are recently achieving notable results with limited quality improvement efforts, none of them appear to be on the path to making tests of change an organisation-wide strategy (James, 2013). In high-income countries , however, process improvement is widely accepted as the basic quality improvement strategy for achieving improved outcomes , however, this approach and/or perspective is still emerging for most African health leaders and for many of their counterparts. It is therefore imperative that the focus of the Namibian public health care sector shifts from access to basic/primary health care to research and hence evidence based care practice by strategically/systematically adopting process improvement tools to improve the quality of public healthcare services.

Objectives of The Study

The main objective of the research was to assess the level of adoption of quality improvement tools and strategies in selected Namibian public hospitals.

In addition to the main objective, the specific research objectives were:

- To assess the current quality improvement tools and strategies (techniques) used in Namibian public hospitals.
- To investigate the barriers to the adoption of quality improvement tools and strategies in public hospitals.
- To develop a conceptual framework for implementation of quality improvement tools and strategies in Namibian public hospitals.

Research Problem Description

A review of relevant scientific literature suggests that little or no previous study has investigated the adoption of quality improvement tools techniques in the Namibian public health care industry. In most countries however, many public hospitals have turned to adopting industrial engineering tools to address healthcare processes inefficiencies and shortcomings (Douglas & Mary, 2015; Aspden, Corrigan , Wolcott & Shari, 2004; Fischman, 2010; Irfan, Aamir, Kee & Awan, 2012).

In Namibia however, the concept of these tools is still not understood by public healthcare leaders and there is little research on implementation frameworks to guide the MoHSS in the adoption process. Namibia's public health facilities face several challenges related to governance, financing, resources, communication, documentation and coordination. Unclear job descriptions, lack of proper maintenance programmes and lack of professionalism have contributed to the perceived poor health service provision. A standard approach towards quality management across public health facilities is found to be missing (Zere, Thomas , & Kalumbi , 2006; MoHSS, 2014).

Consequently, the in-hospital quality assurance units are fragmented (each division/department deal with its own quality issues independently instead of feeding into the larger hospital quality improvement plan) and generally focusing on the issues identified by the state (MoHSS) such as accreditation issues, checking documentation, reviewing the work of MoHSS committees, studying credentialing processes (MoHSS, 2014; Chassin , 1996).

Methodology

The data for the research was collected using a cross-sectional questionnaire survey which had two formats/versions; hard copy version and an online version. The public hospitals which are not in Khomas were emailed the online version while for the public hospitals in Khomas, the researcher personally distributed the hard copy version. Both versions consisted of an introductory paragraph, introducing the researcher, aims & objectives of the research and expected benefits of the research findings.

Sampling

The target regions were selected using the systematic random sampling technique in which the elements are selected at a regular interval according to a given list. The fourteen (14) regions in Namibia were listed in no specific order, selecting every third in the list to the required six regions. i.e. 14⁄6=2.3. This sampling resulted in the following six (6) regions; Khomas, Otjozondjupa, Erongo, Omusati, Omaheke & Ohangwena. The selected public hospitals in these regions then formed the final sample from which data was collected. These hospitals were randomly selected using the lottery method to participate in this research study.

Data Analysis

Data was analysed using descriptive statistics/analysis, average scores; standard deviation (SD), Coefficient of Variation (CV), and frequency of use to quantify the responses to questions relating to the QI tools implementation, ranking of critical success factors and relevance of patient centred factors. The coefficient of variation (CV) was used as a general measure of standardised skewness on responses. The software packages that achieved this were MS Excel 2016 and the Statistical Package for the Social Sciences (SPSS) software package version 24.

Results

Findings from this study showed there is a low level of adoption of QI tools and techniques in public hospitals in Namibia.

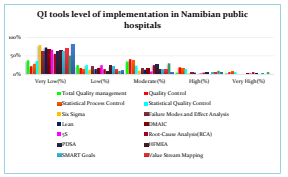

Figure 1. QI tools level of adoption in Namibian public hospitals.

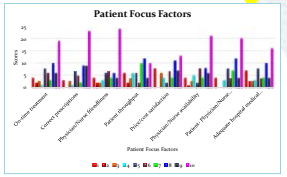

Figure 3. Patient focus factors

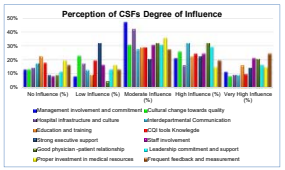

Figure 2. Perceived influence of CSFs

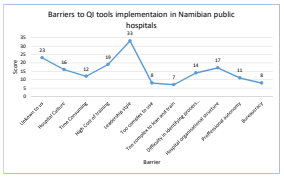

Figure 4. Barriers to QI implementation in Namibian public hospitals

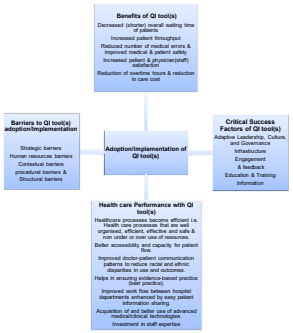

Figure 5. Developed QI adoption/implementation conceptual framework

Conclusion

The research results shows that there is low level of adoption of quality improvement tools in the Namibian public healthcare system. There is therefore a need to expose the Namibian public healthcare sector to the quality improvement practices of the 21st century that revolves around adopting industrial engineering quality improvement tools were the patient's overall experience (safety, satisfaction, impression and perspective) is the centre of care delivery, i.e. evidence-based care practice. This will lead to a paradigm shift from statistical process/quality control of clinical functions to more process improvement tools such Lean or Six Sigma. The barriers that will inhibit the success of QI adoption in the current public healthcare settings need to be addressed first before considering implementing quality improvement initiatives, leadership style was found to be the leading barrier in Namibia and therefore, should the public healthcare decide to adopt industrial engineering QI tools, there is need for service provision coherence/alignment between the three ministries (MoHSS, MoF & MoWT) and the entire healthcare staff members to address structural problems and inefficiencies that currently persist in the public health care system. This will enable the building of support systems for quality improvement and providing the necessary resources for high quality care to be provided.

It is of utmost importance to use the model developed in this study as a guideline in the adoption of QI tools and practices in Namibia. The model was designed to be simple, but quite comprehensive and easy to understand and it addresses all the four major dimensions of successful adoption of QI tools in healthcare.

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