Quality Improvement Practices and Creative Governance Success in Public Hospitals in Kenya

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Abstract

This study assessed the influence of quality improvement practices on creative governance success in Tier four public hospitals in Kenya. The study adopted a descriptive correlation research design. The target population was 200 composed of Administrative officers and Mid-level employees from each hospital. A census survey of 200 respondents was used. A Questionnaire yielding an acceptable reliability coefficient 0.7 and response rate of 157 respondents was attained during data collection. The background information was analyzed using descriptive statistics such as frequencies and percentages. The hypothesis testing was done using linear regression analysis. Quality Improvement (QI) practices assessed entailed: Establishment of dedicated quality improvement teams, holding of regular quality improvement meetings, establishing QI procedures/models, evidence of QI data collection and analysis and, monitoring to measure change. Overall, there is implementation of QI practices to some extent in the Tier four hospitals in Kenya. Correlation analysis between QI practices and creative governance indicated a strong positive significant relationship (r= 0.672 p= 0.00,). Creative governance was measured by innovative ideas/products, creative designs of processes, learning new skills, attainment of organization goals, motivated staff and satisfied clients. On testing the study hypothesis, results showed that quality improvement practices influenced creative governance (β= 0.55; p=0.000) but to mere 55% in the case of these selected public hospitals. The study results therefore inform hospital managers on the need to pay more attention to quality improvement practices so that the hospitals may reap the benefits of creative governance which then leads to superior delivery of services.

Keywords: Quality Improvement, Quality Models, Data Analysis, Monitoring for Change, Creative Governance

Introduction

According to Noel et al. (2017), quality improvement (QI) in healthcare refers to the varied initiatives across healthcare organizations that aim to improve health outcomes for patients. The Quality Improvement Movement emerged in force after 1999 when the Institute of Medicine (IOM) reported that over 90,000 patients in the U. S. die each year as a result of medical errors (IOM, 2000). Nevertheless, QI has become a topical concern in health care practices and regulation. Improving the quality of patient care, generally referred to as Quality Improvement (QI), is a constant mission of healthcare. Although QI initiatives take many forms, these typically involve collecting data to measure whether changes to procedures have been made as planned, and whether those changes have achieved the expected outcome (Noel et al., 2017).

World over, there is undisputed need for governments to provide quality health care to its citizens. Different world organizations have studied world health status and have emphasized the need for quality in service offerings. For instance, the World Health Organization (2011) report indicated the need of progressing towards all-inclusive health requires flexible working health systems, equitable financing and fit for providing quality focused health services. Pan American Health Organization (2014) reported that solid health frameworks require proper infrastructures, safe pharmaceuticals; qualified professionals sufficient in numbers and well-coordinated healthcare service systems.

In Kenya, the Government recognizes that good health is a critical pillar in ensuring individual, household, a community's and a country's prosperity (Government of Kenya [GoK], 1994). According to Kimalu et al. (2006), the GoK has given high priority to improvement of health status of Kenyans through recognition that good health is a prerequisite to socio-economic development. Following the release of the World Development Reports 'Investing in Health' in 1993, there was shift of health policy towards reforming institutions and structures and orienting healthcare services to the market (Oyaya & Rifkin, 2003). In November 1994 the GoK came up with a long-term plan, the Kenya Health Policy Framework (1994-2010). This fifteen-year plan was dedicated to the health sector and particularly in investment in health (GoK, 1994). The Kenya Health Policy Framework (KHPF) of 1994 concentrated on decentralizing support from the government to the district level and reinforcing the district as the stage of delivery and improvement of health services (Health Systems Trust, 2017). Under this policy plan, GoK formulated and implemented the National Health Sector Strategic Plan (NHSSP) which ran from 1994 to 2010. According to GoK (2013) report, Kenya reported challenges and did not meet Millenieum Development Goals (MDGs) among them MDG number 4, 5 and 6 that were related to health.

The shortfalls in healthcare delivery services compelled Kenyans to demand for better services through the enactment of the Constitution of Kenya 2010. Article 43 of Constitution of Kenya 2010 makes it a fundamental right for Kenyans to access the highest attainable standards of health care services (GoK, 2010). The GoK has included health sector under the social strategy in its long-term plan, Vision 2030 Strategic Plan, which runs from 2008 to 2030 (GoK, 2007b). In line with Vision 2030 Strategic Plan, the GoK has developed Kenya Health Policy 2014-2030 which is a specific health sector centered long term plan (GoK, 2014a). According to the United Nations Development Programme (2016), Kenya has committed to full implementation of Sustainable Development Goals (SDGs). In the devolved system of government in Kenya, the national government is involved in health policy and strategy formulation and tasks county governments through their health facilities to implement the policies (Murkomen, 2012).

Despite the aforementioned efforts to improve healthcare, Kenya's public health sector has continued to face challenges in governance and in delivery of quality services (Opon, 2016). In the recent past, there has been public outcry for improvement in healthcare following incidents of malpractices and strikes in public hospitals. Evident, is a persistent migration trend of middle and upper socio-economic status clients opting for private hospital services leaving the poor Kenyans to cope with the deplorable situation of public hospitals. Despite the government and county investment towards improvement of these hospitals, dissatisfaction of clients with the quality of services still persists (WHO, 2017).

Statement of the Problem

A quality, well-developed healthcare system is an absolute necessity in any nation. It allows citizens to receive treatment for diseases, illnesses, and injuries, as well as prevent them. If the healthcare system isn't up to the mark, people might not be able to receive or afford their required treatment (Stasha, 2021). This will ultimately affect a person's quality of life and lifespan (WHO, OECD & World Bank, 2018). Globally, inefficiencies characterizing majority of health service delivery systems are a function of poorly designed operating systems whose outcome is constrained capacity to effectively transform healthcare operations to achieve desired outcomes (Fiaz et al., 2018). Africa wide, the healthcare industry is experiencing many challenges that affect quality of services; in particular, the uncoordinated changes in government regulations, slow adoption of technological innovations, expenditures, and financially unstable situations as well as evolving patient expectations (Smyrnova, 2020; Oleribe et al., 2019; Azevedo, 2017).

Alarmingly, Kenya's public health sector has continued to face challenges in governance and in delivery of quality services. For instance, in the recent past, there has been public outcry for improvement in these aspects following incidents of malpractices and strikes in public hospitals (KEMSA taskforce report, 2020). Evident, is a persistent migration trend of middle and upper socio-economic status clients opting for private hospital services leaving the poor Kenyans to cope with the deplorable situation of public hospitals especially at county level (Barasa et al., 2017). A report by Kenya Medical Supplies Agency (KEMSA) taskforce noted poor quality services in the sector attributed to coordination and disconnect between the procurement function and other functions such as distribution and warehousing of drugs and other medical supplies (KEMSA taskforce report, 2020). Despite the government and county investment towards improvement of services in hospitals, dissatisfaction of clients with the quality of services still persists (WHO, 2017). This study raises concerns of adopted quality improvement practices and creative governance in the health processes in Kenya.

Empirically, quality improvement practices have received attention from scholars and management practitioners in the past; however, linkage of these practices with the topical issue of creative governance success, has not received much focus. For instance, Otieno (2020) in a recent study analyzed access to quality primary healthcare services and associated factors in urban slums in Nairobi-Kenya. Mugo and Nzuki (2019) conceptualized integration of eHealth with eGovernance in a developing country as a measure of quality improvement. Dahlin et al. (2019) emphasized on process mining for quality improvement as propositions for health practice and research. In 2019, Daniels et al evaluated use of standardized patients to assess quality of healthcare in Nairobi. On the other hand, World Health Organization in 2018 studied "Why quality in healthcare? emphasizing the need for quality primary healthcare in developing countries. WHO, OECD and World Bank (2018) gave a systematic analysis on delivering quality health services as a global imperative for universal health coverage. Mukabana et al (2018) investigated on improving long acting and reversible contraceptives uptake using quality improvement strategy at a sub-county hospital Kenya.

Mwaambi (2017) studied healthcare financing and access to health care services in Kenya and recommended the need to improve finance access procedures. McGivern et al. (2017) focused on pastoral practices for quality improvement in a Kenyan clinical network while Fredriksson et al. 2017 had concerns on use of data from national quality registries for quality improvement in Swedish hospitals. In another study, Noel et al. (2017) sought to improve the quality of

healthcare data through information design. Barasa et al. (2017) assessed the impoverishing effects, and factors associated with the incidence of catastrophic health care payments in Kenya as Fotso and Mukiira (2011) studied perceived quality of and access to care among poor urban women in Kenya and their utilization of delivery care though harnessing the potential of private clinics. Leatherman et al. (2010), worked on the role of quality improvement in strengthening health systems in developing countries. This study tries to fill knowledge, methodological and practice gap that has not been addressed by these prior researches by focusing on influence of quality improvement practices on creative governance success in Kenya's Public Hospitals using a descriptive cross-sectional and correlational research designs against the previously used qualitative and descriptive study designs.

In a nutshell, Kenya's public hospitals have been in limelight due to unsatisfactory services in delivery of health as a public good. The study analyzed the quality improvement practices and how they influence creative governance success among tier four hospitals in Kenya since they offer comprehensive health services. Thus, the study anticipates makinga contribution towards improvement of health care services through quality improvement practices. Further the study may lead to improvement of health care management throughcreative governance approach.

Study Hypothesis

The study was premised on this null hypothesis:

H0: Quality improvement practices have no influence on creative governance success in public hospitals

Literature Review

Theoretical Review

The understanding of study variables in this paper is informed by theories in quality improvement and creative governance as discussed in the following section.

Theories of Quality Improvement

The concept of quality is derived from the industrial quality improvement gurus such as: (Juran, 2004; Feigenbaum, 1991; Deming, 1982; Crosby, 1979) and the concept of Total Quality Management and control as advanced by Kaoru (1985). Quality is regarded as the provision of healthcare that is safe, effective, patient-centered, timely, efficient and equitable (Boaden et al. 2008). There are several well-established approaches to QI exist including the Plan-Do-Study Act cycle, Statistical Process Control, Six Sigma, Lean, Theory of Constraints and personalization (Boaden et al., 2008). This study focused on QI practices informed by these theoretical approaches, particularly, the Continuous Quality Improvement (CQI) model (Figure1) advanced by Shortell in 1998, which points to the possible connection between CQI and improved health outcomes.

Finally, the idea of creative governance success in this study is explained by the work of Csikszentmihalyi (1996) in his theory of creativity flow whereby the focus is on the interplay among the creative person (the individual), the domain (the discipline) and the field (the experts/gatekeepers). The individual is the innovation manager, the domain is the discipline of creativity, and the field is comprised of the gatekeepers. For instance, CEOs make decisions which either allow or inhibit individual and/or group innovation. In relation to this study,

hospital managers/administrators have the capacity to use creativity in decision making that may lead to innovation in provision of healthcare services.

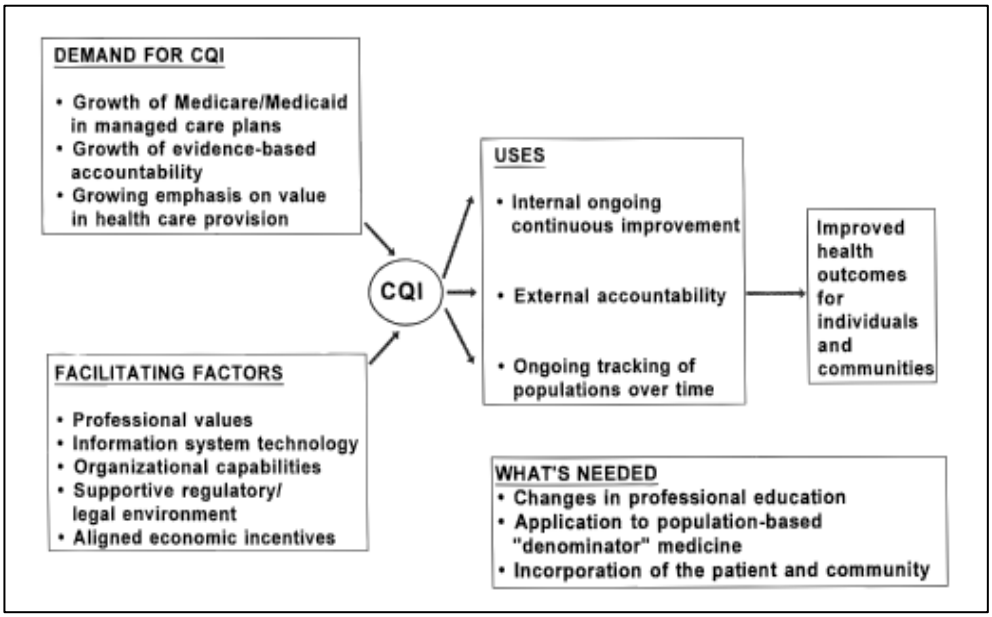

Figure 1: Continuous Quality Improvement Framework for Expanded Use and Impact
Source: Shortell (1998)

Empirical Review

Influence of QIP on Creative Governance Success

A review of literature has shown that studies relating to quality management practices and creative governance success are scanty. Previous research has mainly focused on quality understanding rather than on quality improvement with little evidence of relating it with performance variables. For instance, the World Health Organization in 2018 studied "Why quality? in order to establish why quality was considered an important aspect in service delivery. Walsh et al. (2016) explored the "how" to do quality improvement. Leatherman et al. (2010), worked on the role of quality improvement in strengthening health systems in developing countries. Mold and Petersonin (2005) studied primary care practice-based research networks; Hysong et al. (2006) focused on Audit and feedback and clinical practice guideline adherence: making feedback actionable; Batalden and Davidoff (2007) analyzed "What is "quality improvement" and how can it transform healthcare? Studies related to study variables are reviewed as follows:

Establishing Dedicated QI teams or Quality Control Circles(QCC)

Chen and Kuo (2011) carried out a study on Quality improvement perspectives on organizational learning from hospital-based quality control circles in Taiwan.The results revealed the existence of a link between organizational learning and QCC activities. In addition, the reviewed QCC activities facilitated organizational learning and contributed to health care quality improvements in the studied hospitals. Finally, QCC practices in hospitals facilitated dissemination of organizational learning concepts in those hospitals.

Holding Regular QI Meetings

Boyer et al. (2012) focused on process quality improvement in an examination of general vs. outcome-specific climate and practices in hospitals among US hospitals. General safety climate and quality practices are found to establish an environment in which outcome-specific efforts enable process quality improvement. A split-group SEM analysis highlights significant differences in managing healthcare safety outcomes through climate and practices. In particular, the employment of practices focused on the specific outcome goals is found to relate to higher quality of patient care in smaller hospitals. In contrast, the development of a climate focused on specific outcome goals is found to relate to higher quality of patient care in larger hospitals.

Bac et al. (2015) studied medical education meetings and the quality improvement spiral at Mpumalanga, South Africa. The study concluded that service learning and quality-improvement projects can be successfully integrated in one rotation and can contribute to the development of the different roles of a medical expert among medical students.

Establishing Models/Procedures to Meet Goals

McGivern et al. (2017) explored a model of 'Pastoral practices' for quality improvement in a Kenyan clinical network to implement a form of quality improvement (QI) into clinical practice. Using a qualitative empirical case study, conducted in 2015-16, shows the way practices constructing and linking local evidence-based guidelines and data collection processes provided a foundation for QI. Participation in these constructive practices gave network leaders pastoral status to then inscribe use of evidence and data into routine care, through championing, demonstrating, supporting and mentoring, with the support of a constellation of local champions. By arranging network meetings, the professional community discussed evidence, data, QI and professionalism. On a different dimension, Omidvari et al. (2016), examined the effectiveness of nutritional screening in improving quality of care (professional practice) and patient outcomes compared with usual care. The study yielded varying results on procedures used and concluded that the evidence is insufficient to support the effectiveness of nutritional screening, therefore, more high-quality studies should be conducted to assess the electiveness' of nutritional screening in improving quality different settings. In another study, Fønhus et al. (2018), focused on patient-mediated interventions to improve professional practice and found out that two types of patient-mediated interventions, patient-reported health information and patient education, probably improve professional practice by increasing healthcare professionals' adherence to recommended clinical practice.

Data Collection & Analysis on QI

Pioneering scholars had been advocating for the use of measurement and data to judge how effective processes were at achieving desired outcomes. Notably, Deming (1994) talked about the science of improvement in his System of Profound Knowledge on the Model for Improvement (MFI); The Plan-Do-Study-Act cycle was developed by Edwards Deming in 1994 and continues to influence QI practice today. Flodgren et al (2016) analyzed external inspection of compliance with standards for improved healthcare outcomes in South African Hospitals. They discovered paucity of high-quality controlled evaluations of the effectiveness and the cost-effectiveness of external inspection systems and recommended further studies across a range of settings, contexts and studies reporting outcomes important to patients.

Noël et al (2017) assessed improvement of the quality of healthcare data through information design. The study provides an understanding of the current situation of QI data visualization at regional healthcare organization. Addressing the current QI data needs of healthcare providers is essential to improve the quality of healthcare. The study indicates the need for further research to provide comparable data in other contexts. Dahlin et al. (2019) explore process mining for quality improvement with an aim of providing propositions for practice. Process mining offers ways to discover patient flow, check how actual processes conform to a standard, and use data to enhance or improve processes. The study observed that although process mapping is still valuable in quality improvement and suggested that increased focus on process miningadds to quality improvement by providing a better understanding of processes in terms of uncovering (un)wanted variations as to obtain better system results.

Monitoring to Measure Change

As early as 1998, Stephen Shortell made an assessment of the impact of continuous quality improvement on clinical practice and concluded that clinical quality improvement applications are more likely to be effective under certain conditions: first, when they are carefully focused on areas of real importance to the organization and addressed with clearly formulated interventions. Secondly, when the organization is ready for change and has prepared itself by appointing capable leadership, creating relationships of trust with physicians, and developing adequate information systems; third, when there is a conducive external environment. The study advanced a CQI model that the patient and the community must be invited to participate in clinical quality improvement work; along with application of information system technologies.

Fredriksson et al. (2017) investigated the use of data from National Quality Registries (NQRs) in local quality improvement as well as purported key factors for effective clinical use in Sweden. Significant differences between registries in key factors such as management interest and in use of NQR data in local quality improvement were found. The study suggested further studies on the link between the registry's level of development and factors important for routinization of innovations such as NQRs needs investigation.

Some studies have found a positive relationship between quality management practices and organizational performance. For instance, Mutua (2014) provided evidence of an existing relationship between quality management practices and financial performance of manufacturing firms and the effectiveness of the implementation of quality management practices. In addition, Choi and Eboch (1998) found a significant direct link between quality management practices and performance of a firm. The critical factor, "top management support" is cited by most researchers. Strong commitment from the top management is vital in quality management and leading to higher quality performance. Anderson et al. (1995) consent to this notion. Senior management acts as a driver of TQM implementation, establishing values, goals, and systems to satisfy customers' needs and expectations and improve organizational performance (Ahire et al., 1996).

According to Bell and Omachonu (2011) in a study on quality system implementation process for business success, significant linkage between improved documentation, firm's performance and organizational performance was established. Anyango and Kegoro (2020) found out that Continuous improvement has influence on operational performance of selected public universities in Kenya. Chumba et al. (2019) carried out a study on assessment of the

relationship between ISO 9001 certification and performance of manufacturing firms in Kenya whereby a positive relationship between financial and Human Resource Management (HRM) control measures, and a firm's performance was found. Njuguna (2013) also tested value chain management practices and supply chain performance of large manufacturing firms in Nairobi and found out that Quality improvement within the value chain improved supply chain performance. There indeed exists a gap in research directly relating quality management improvement practices and creative governance success in Kenyas' public health sector.

Conceptual Framework

The reviewed theoretical and empirical literature yields hypothesized relationship between study variables as shown in Figure 2.

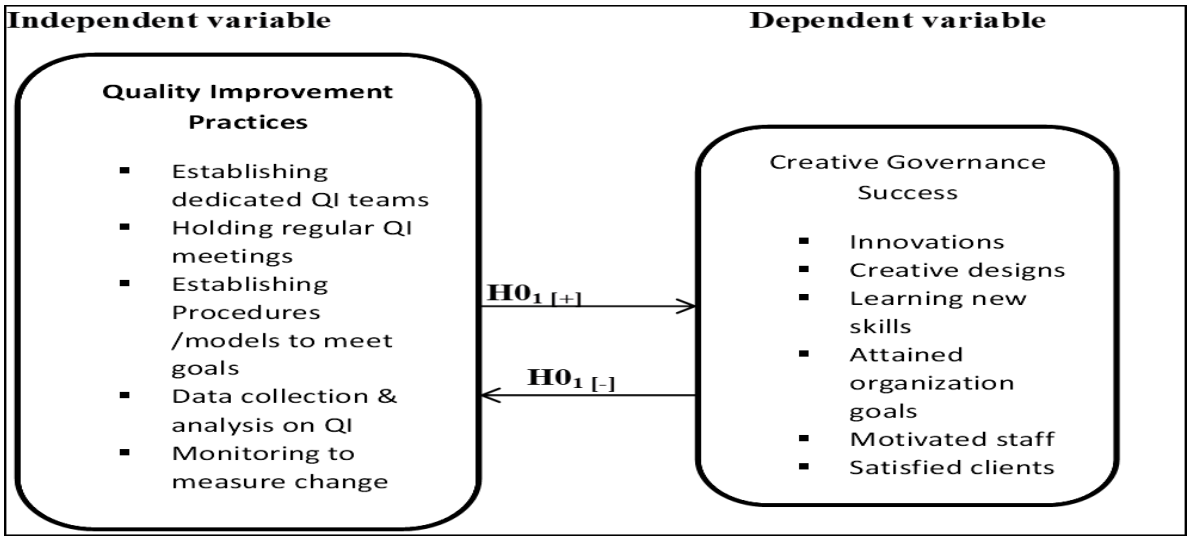

Figure 2: Influence of Quality Improvement Practices on Creative Governance Success

Research Methodology

The study used quantitative approach to data collection and analysis adopting a descriptive correlation research design. As such, the study targeted five managerial/Administrative officers in each of the 14 tier four hospitals in Kenya; with additional six Mid-level employees from each hospital to take care of attrition and information validity given the busy hospital schedules. A census survey of 200 respondents was used. Response rate was good with 157 respondents participating. A structured questionnaire was used to capture respondent's background data and collect both independent and dependent variable measures. Research instrument was piloted and tested for reliability with acceptable level of Cronbach coefficient at 0.7. Appropriate research approvals from the University Institutional Review Board, NACOSTI, and Hospital permission were sought. Ethical considerations of confidentiality, anonymity and honesty were adhered to. Descriptive statistics were used to analyze background information; while linear regression was used to test the hypothesis of the study.

Results

This study sought to establish the influence of quality improvement practices on creative governance success. Percentages were used to analyze respondents' opinion regarding given statements on a five-point Likert scale. The following are the descriptive results obtained from the analysis.

Quality Improvement Measures

a) Established Dedicated Quality Improvement Teams

The study investigated the opinion that hospitals have established dedicated quality improvement teams. The findings showed that 15.9% of the respondents disagreed and strongly disagreed with the opinion, 12.1% were neutral on the opinion and 71.9% agreed and strongly agreed as illustrated in Table 1.

Table 1: Established Dedicated Quality Improvement Teams

	Frequency	**Percent**
Strongly Disagree	4	2.5
Disagree	21	13.4
Neutral	19	12.1
Agree	69	43.9
Strongly Agree	44	28.0
Total	157	100.0

b) Holding Regular Quality Improvement Meetings

The study assessed the opinion that hospitals hold regular quality improvement meetings. The findings showed that 15.2% of the respondents disagreed and strongly disagreed with the opinion, 12.1% were neutral on the opinion and 72.7% agreed and strongly agreed. Table 2 shows these results.

Table 2: We Hold Regular Quality Improvement Meetings

	Frequency	**Percent**
Strongly Disagree	1	.6
Disagree	23	14.6
Neutral	19	12.1
Agree	72	45.9
Strongly Agree	42	26.8
Total	157	100.0

c) Established Procedures/ Models to Meet Quality Improvement Goals

The study investigated if hospitals have established procedures/models to meet quality improvement goals. The findings shown in Table 3 portray that 15.9% of the respondents disagreed and strongly disagreed with the opinion, 17.8% were neutral on the opinion and 66.3% agreed and strongly agreed.

Table 3: Established Procedures/ Models to Meet Our Quality Improvement Goals

	Frequency	**Percent**
Strongly Disagree	6	3.8
Disagree	19	12.1
Neutral	28	17.8
Agree	64	40.8
Strongly Agree	40	25.5
Total	157	100.0

d) Regular Data Collection and Analysis on Quality Improvement and Practices in the Institution

The opinion of respondents showed that there is there is regular data collection and analysis on quality improvement and practices in the hospitals. The findings showed that 22.9% of the respondents disagreed and strongly disagreed with the opinion, 15.9% were neutral on the opinion and 61.2% agreed and strongly agreed with the opinion. Table 4 illustrates these results.

Table 4: Regular Data Collection and Analysis on Quality Improvement and Practices

	Frequency	**Percent**
Strongly Disagree	4	2.5
Disagree	32	20.4
Neutral	25	15.9
Agree	67	42.7
Strongly Agree	29	18.5
Total	157	100.0

e) Consistent Monitoring to Measure Change in Quality Improvement Practices

The opinion of respondents indicated that there is consistent monitoring to measure change in quality improvement practices in the hospitals. The findings in Table 5 indicate that 25.6% disagreed and strongly disagreed with the opinion, 19.2% were neutral on the opinion and 55.1% agreed and strongly agreed with the opinion.

Table 5: Consistent Monitoring to Measure Change in Quality Improvement Practices

	Frequency	**Percent**
Strongly Disagree	5	3.2
Disagree	35	22.4
Neutral	30	19.2
Agree	63	40.4
Strongly Agree	24	14.7
Total	157	100.0

f) Adoption of IT in Quality Improvement

On investigation about the opinion that there is adoption of IT in quality improvement in the hospitals; the findings showed that 10.8% of the respondents disagreed and strongly disagreed with the opinion, 19.9% were neutral on the opinion and 70% agreed and strongly agreed with the opinion. These results are shown in Table 6.

Table 6: Adoption of IT in Quality Improvement

	Frequency	**Percent**
Strongly Disagree	5	3.2
Disagree	12	7.6
Neutral	30	19.1
Agree	71	45.2
Strongly Agree	39	24.8
Total	157	100.0

Creative Governance Success Measures

a) Evidence of New Products, Processes or Ideas

The study surveyed the opinion that there is evidence of new products, processes, ideas, as results of creativity. The findings illustrated in Table 7 showed that 11.5% of the respondents disagreed and strongly disagreed with the opinion, 18.6% were neutral on the opinion and 69.9% agreed and strongly agreed with the opinion.

Table 7: There is Evidence of New Products, Processes, and Ideas as Results of Creativity

	Frequency	**Percent**
Strongly Disagree	2	1.3
Disagree	16	10.3
Neutral	29	18.6
Agree	83	53.2
Strongly Agree	27	16.7
Total	157	100.0

b) Existence of Forums for Creativity

The investigated the opinion that there are forums/meetings where creativity is discussed in the organization. The findings showed that 14.8% of the respondents disagreed and strongly disagreed with the opinion, 29.7% were neutral on the opinion and 55.5% agreed and strongly agreed with the opinion. Table 8 portrays this outcome.

Table 8: There are Forums/Meetings where Creativity is Discussed in the Organization

	Frequency	**Percent**
Strongly Disagree	5	2.6
Disagree	19	12.3
Neutral	46	29.7
Agree	55	35.5
Strongly Agree	32	20.0
Total	157	100.0

c) Creative/Imaginative Methods

The assessed the opinion that those who come up with creative/imaginative methods, products, processes, ideas are rewarded by the management. The findings shown in Table 9 demonstrate that 49% of the respondents disagreed and strongly disagreed with the opinion, 18.6% were neutral on the opinion and 32.4% agreed and strongly agreed with the opinion.

Table 9: Those Who Come Up with Creative/Imaginative Methods, Products, Processes, Ideas are Rewarded by the Management

	Frequency	**Percent**
Strongly Disagree	28	18.6
Disagree	46	30.5
Neutral	28	18.5
Agree	34	22.5
Strongly Agree	15	9.9
Total	157	100.0

d) Loosing to Competitors

The study also explored the opinion that there are instances where some hospitals in the past lost business to competitors due to lack of flexible work procedures. The findings showed that 27% of the respondents disagreed with the opinion, 25% were neutral on the opinion and 36.2% agreed with the opinion. These results are illustrated in Table 10.

Table 10: There are Instances where the Organization has in the Past Lost Business to Competitors due to Lack of Flexible Work Procedures

	Frequency	**Percent**
Strongly Disagree	15	9.6
Disagree	27	17.2
Neutral	25	16
Agree	57	36.2
Strongly Agree	33	21.0
Total	157	100.0

e) Flexible Work Procedures

The study surveyed on the opinion that there is evidence that the management has adopted more flexible work procedures. Table 11 shows the findings that 16.6% of the respondents disagreed and 8% strongly disagreed with the opinion; 29.3% were neutral on the opinion and 33% agreed and 16% strongly agreed with the opinion.

Table 11: There is Evidence that the Management has Adopted more Flexible Work Procedures

	Frequency	**Percent**
Strongly Disagree	8	5.1
Disagree	26	16.6
Neutral	46	29.3
Agree	52	33
Strongly Agree	25	16
Total	157	100.0

f) Regular Reviews

The study analyzed the opinion that there are regular reviews of the work procedures in the organization to ensure that the ones in place are efficient. the findings showed that 17.8% of the respondents disagreed and strongly disagreed with the opinion, 17.8% were neutral on the opinion and 40.2% agreed and 20.4% strongly agreed with the opinion as shown in Table 12.

Table 12: There are Regular Reviews of the Work Procedures in the Organization

	Frequency	**Percent**
Strongly Disagree	6	3.8
Disagree	28	17.8
Neutral	28	17.8
Agree	63	40.2
Strongly Agree	32	20.4
Total	157	100.0

Attainment of Organizational Goals

a) Quality Services to the Public

The paper sought to establish whether the hospitals offered quality services to the public. The findings showed that 7.7% of the respondents disagreed and strongly disagreed with the opinion, 8.9% were neutral on the opinion and 83.4% agreed and strongly agreed with the opinion. Table 13 illustrates these results.

Table 13: My Hospital Offers Quality Services to the Public

	Frequency	**Percent**
Strongly Disagree	5	3.2
Disagree	7	4.5
Neutral	14	8.9
Agree	71	45.2
Strongly Agree	60	38.2
Total	157	100.0

b) My Hospital Offers Timely Services to the Public

The study examined the opinion that hospitals offer timely services to the public. The findings shown in Table 14 demonstrate that 11.5% of the respondents disagreed and strongly disagreed with the opinion, 12.3% were neutral on the opinion and 76.5% agreed and strongly agreed with the opinion.

Table14: My Hospital Offers Timely Services to the Public

	Frequency	**Percent**
Strongly Disagree	4	2.6
Disagree	14	8.9
Neutral	19	12.3
Agree	79	51.2
Strongly Agree	39	25
Total	157	100.0

c) The Level of Hospital Care is Excellent

This section addressed the respondents' opinions on whether the level of hospital care is excellent. The findings showed that 23.4% of the respondents disagreed and strongly disagreed with the opinion, 17.2% were neutral on the opinion and 59.4% agreed and strongly agreed with the opinion as portrayed in Table 15.

Table 15: The Level of Hospital Care is Excellent

	Frequency	**Percent**
Strongly Disagree	5	3.3
Disagree	31	20.1
Neutral	27	17.2
Agree	57	36.3
Strongly Agree	36	23.1
Total	157	100.0

d) There is Sufficient Staff to Serve Patients

The study sought to investigate the opinion that hospitals have sufficient staff to serve patients. Table 16 illustrates the findings that 64.9% of the respondents disagreed and strongly disagreed with the opinion, 12.7% were neutral on the opinion and 22.4% agreed and strongly agreed with the opinion.

Table 16: There is Sufficient Staff to Serve Patients

	Frequency	**Percent**
Strongly Disagree	46	29.2
Disagree	56	35.7
Neutral	20	12.7
Agree	19	12.2
Strongly Agree	16	10.2
Total	157	100.0

Motivated Staff

a) Annual Productivity

The study sought to find out the opinion of the respondents on the aspect of improvement in employee performance/ productivity every year in the hospitals. The findings showed that 17.2% of the respondents disagreed and strongly disagreed with the opinion, 26.1% were neutral on the opinion and 56.7% agreed and strongly agreed with the opinion. Table 17 demonstrates these results.

Table 17: Annual Productivity

	Frequency	**Percent**
Strongly Disagree	8	5.1
Disagree	19	12.1
Neutral	41	26.1
Agree	67	42.7
Strongly Agree	22	14.0
Total	157	100.0

b) Employee Turnover

The study analyzed the opinion that there is reduction in employee turnover every year. The findings showed that 34.4% of the respondents disagreed and strongly disagreed with the opinion, 27.4% were neutral on the opinion and 38.2% agreed and strongly agreed with the opinion as portrayed in Table 18.

Table 18: **Employee Turnover**

	Frequency	**Percent**
Strongly Disagree	13	8.3
Disagree	41	26.1
Neutral	43	27.4
Agree	42	27.0
Strongly Agree	18	11.2
Total	157	100.0

c) Measurement of Job Satisfaction

The study examined the opinion that employees' measurements of job satisfaction results indicate excellence. The findings in Table 19 showed that 42.0% of the respondents disagreed and strongly disagreed with the opinion, 20.0% were neutral on the opinion and 38.0% agreed and strongly agreed with the opinion.

Table 19: Measurement of Job Satisfaction

	Frequency	**Percent**
Strongly Disagree	14	9.0
Disagree	52	33.0
Neutral	31	20.0
Agree	40	25.0
Strongly Agree	20	13.0
Total	157	100.0

d) Commitment and Loyalty

In addition, the study assessed the opinion that there is extraordinary employee commitment and loyalty in the hospital. The findings showed that 38.8% of the respondents disagreed and strongly disagreed with the opinion, 23.0% were neutral on the opinion and 38.2% agreed and strongly agreed with the opinion. Table 20 demonstrates these results.

Table 20: Commitment and Loyalty

		Frequency	**Percent**
Valid	Strongly Disagree	31	19.7
	Disagree	30	19.1
	Neutral	36	23.0
	Agree	40	25.5
	Strongly Agree	20	12.7
	Total	157	100

Inferential Statistics Results

Correlation between Quality Improvement Practices and Creative Governance Success

A Pearson correlation test was done to investigate whether there is a significant relationship between quality improvement practices and creative governance success or not. The analysis findings indicate that there is a strong positive significant correlation between quality improvement practices and creative governance success at (p= 0.00, r= 0.672). Table 21 illustrates these study results.

Table 21: **Correlation between Quality Improvement Practices and Creative Governance Success**

		Creative Governance
Quality Improvement	Pearson Correlation	.672**
	Sig. (2-tailed)	.000
	N	137

****. Correlation is significant at the 0.01 level (2-tailed).**

In order to assess how quality improvement predicts creative governance success, a bivariate regression analysis was conducted. The linear regression results, shown in Table 22 indicates that quality improvement practices significantly predicts 45.2% of the creative governance success with (R-square= 0.452). This implies that apart from quality improvement practices, there may be other factors that explain the remaining 54.8% of the model which further studies may explore.

Table 22: Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
Relationship between quality improvement practices and creative governance success	.672[a]	.452	.448	.52072	.452	111.323	1	135	.000
a. Predictors: (Constant), Quality improvement									
b. Dependent Variable: Creative Governance									

Further, the regression coefficients deduced from Table 23, indicate that increasing quality improvement by one unit, creative governance increases by 0.548. This implies a significant influence of Quality improvement on creative governance success.

Table 23: Regression Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.754	.264		2.859	.005
	Quality Improvement	.433	.055	.548	7.820	.000
a. Dependent Variable: Creative Governance						

Discussion

The main objective of the study was to examine the influence of quality improvement practices on Creative governance success. The measures of independent variable "quality improvement practices" reveal that the Tier four public Hospitals in Kenya have to some extent implemented some of these practices (results edge towards agree and strongly agree). However, the reponses on creative governance outcomes seem to veer towards negative side (Disagree and strongly disagree); implying that the quality improvement practices have not strongly influenced creative governance success. The tested hypothesis shows a significant correlation coefficient of r= 0.672; p=0.00. Observation from the regression analysis, shows that QI practices have a

significant influence (*Beta*= 0.548; *p*=0.00). Further, it can be deduced that if QI practices are revamped and optimized, there would be realization of creative governance outcomes in these hospitals.

These results concur with Leatherman et al. (2010) who purported that quality improvement has a significant role in strengthening health systems in developing countries. Hysong et al (2006) opined that Audit, feedback and clinical practice guideline adherence makes feedback actionable leading to improvementin practice. Additionally, Batalden and Davidoff (2007) suggested that "quality improvement" can transform healthcare systems. Other studies (Mutua, 2014), provided evidence of an existing relationship between quality management practices and financial performance of manufacturing firms in Kenya. Choi and Eboch (1998) found a significant direct link between quality management practices and performance of a firm. Anyango et al. (2012) carried out a study on Assessment of the relationship between ISO 9001 certification and performance of manufacturing firms in Kenya whereby a positive relationship between financial HRM, firm's performance, HRM and control measures and a firm's performance was found. Magutu et al. (2015) also tested Value Chain Management Practices and Supply Chain Performance of Large Manufacturing Firms in Nairobi and found out that Quality improvement within the value chain improved supply chain performance.

Further, the study results are consistent with assertions on establishing dedicated QI teams or Quality Control Circles as advanced by Chen and Kuo (2011); That QCC practices in hospitals facilitated dissemination of organizational learning concepts in those hospitals.

Regarding holding regular QI Meetings as part of quality improvement process, the study results support the work of Boyer et al. (2012) who purported that process quality improvement is found to relate to higher quality of patient care in larger hospitals. The results are also consistent with Bac et al (2015) who opined that Service learning and quality-improvement projects can be successfully integrated in one rotation and can contribute to the development of the different roles of a medical expert among medical students. Consistently, McGivern et al. (2017) advance that QI improvement can be achieved by arranging network meetings, the professional community discussed evidence, data, QI and professionalism.

Results related to Data Collection and Analysis on QI, show agreement with the work of Noël et al. (2017) who suggested that increased focus on process mining adds to quality improvement; while Flodgren et al. (2016) alluded to possibility of external inspection of compliance with standards for improved healthcare outcomes. Assessing monitoring to measure change results also show consistency with the work of Shortell (1998) which advanced a CQI model that the patient and the community must be invited to participate in clinical quality improvement work; along with application of information system technologies. However, Fredriksson et al. (2017) investigated the use of data from National Quality Registries (NQRs) in local quality improvement in Sweden but found significant differences between registries in key factors such as management interest and in use of NQR data in local quality improvement.

Mainly study results on the independent variable's latent measures versus the dependent variable point to paucity of consistent results from varying studies and hence this study has added to this knowledge as well as practice gap on Continuous Quality improvement and Health care outcomes as such displayed through creative governance outcomes.

Conclusion and Recommendation

The study concludes that quality improvement practices positively influences creative governance success; though with average effect in the case of Tier four public hospitals in Kenya. Therefore, the study recommends improvement on quality management practices and performance management practices in Kenya's public hospitals. Although respondents report there is establishment of quality improvement teams, regular quality improvement meetings, and established quality procedures, there is need to improve on monitoring QI practices for change and adoption of feedback from these processes. Regarding creative governance, study outcomes show that the hospitals allow application of innovative ideas, have forums to discuss innovative practices, but there is disagreement that innovation is encouraged. The hospitals have not embraced flexible working hours as demonstrated by reported understaffing. Despite the fact that the respondents agree that the hospitals offer quality services, there is contradicting result that there is no sufficient staffing which is likely to compromise quality of service. Results also reveal that the respondents are not highly motivated and high employee turnover is evident. Based on these study outcomes, the Ministry of Health, hospital managers and regulatory bodies interested in quality offerings need to work towards improving the aforementioned factors.

Further studies may focus on causal effects of independent latent variables and dependent variable using structural equation modeling. Influence of quality improvement practices on creative governance may be tested in other sectors of service. Further studies may also test influence of external regulation and patient/community inclusion on improvement of healthcare systems in Kenya.

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References

Ahire, S., Golhar, D., & Waller, M. (1996). Development and validation of TQM implementation constructs. *Decision Sciences*,*27*(1), 23–56.

Anderson, J. C., Rungtusanatham, M., Schroeder, R. G., & Devaraj, S. (1995). A path analytic model of a theory of quality management underlying the deming management method: Preliminary empirical findings. *Decision Sciences, 26*(5), 637-658.

Anyango, D., Wanjau, K. & Mageto, J. N. (2012). Assessment of the relationship between quality management practices and performance of manufacturing firms in Nairobi. *African Journal of Business and Management, 2*, 63-70.

Anyango, J.A. & Kegoro, H.O. (2020). Continuous improvement on operational performance of selected public universities in Kenya. *The International Journal of Humanities & Social Studies*, *8* (2)31-34.

Azevedo M. J. (2017). The state of health system(s) in africa: Challenges and opportunities. historical perspectives on the state of health and health systems in Africa. *The Modern Era*, *2*(5),1–73.

Bac, M., Bergh, A., Etsane, M.E. & Hugo, J. (2015). Medical education and the quality improvement spiral: A case study from Mpumalanga, South Africa. *Afr J Prm Health Care Fam Med*., 7(1), 738.

Barasa, E.W., Maina, T., Ravishankar, N. (2017). Assessing the impoverishing effects, and factors associated with the incidence of catastrophic health care payments in Kenya. *Int J Equity Health, 16*(31). https://doi.org/10.1186/s12939-017-0526-x

Batalden, P.B., & Davidoff, F. (2007). What is "quality improvement" and how can it transform healthcare? *QualSaf Health Care, 16*(1), 2–3.

Bell, M. & Omachonu, V. (2011). Quality system implementation process for business success. *International Journal of Quality & Reliability Management, 28*(3), 723-734.

Boaden, R., Harvey, G., Moxham, C., & Proudlove, N. C. (2008). *Quality improvement: Theory and practice in healthcare*. NHS Institute for Innovation and Improvement.

Boyer, K.K, Gardner, J.W. & Schweikhart, S. (2012). Process quality improvement: An examination of general vs. outcome-specific climate and practices in hospitals. *Journal of Operations Management, 30*(4), 1- 4.

Chen, I. & Kuo, M.C. (2011). Quality improvement: Perspectives on organizational learning from hospital-based quality control circles in Taiwan. *Human Resource Development International, 14*(1), 91-101.

Choi, T.Y. & Eboch, K. (1998). The TQM paradox: Relations among TQM practices, plant performance and customer satisfaction. *Journal of Operations Management, 17*(1), 59-75.

Chumba P; Sang H. W.; Kibett J. and Kirui J. K (2019) Relationship between ISO 9001 Certification and the Number of Non- Conformities Identified during System Audits in Selected Public Universities in Kenya. *International Journal of Engineering and Management Research*. Volume- 9, Issue- 5.

Crosby, P. (1979). *Quality is free*. McGraw-Hill.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention.* HarperCollins Publishers

Dahlin, S., Eriksson, H., & Raharjo, H. (2019). Process mining for quality improvement: Propositions for Practice and Research.*Quality Management in Health Care, 28*(1), 8-14.

Daily Nation. (2013, November 24). *Public health crisis looms in Kenya as Doctors quit over devolution*. Retrieved from www.naton.co.ke.

Daniels B, Dolinger A, & Bedoya G. (2017). Use of standardised patients to assess quality of healthcare in Nairobi, Kenya: a pilot, cross-sectional study with international comparisons. *BMJ Global Health, 2*(1**)** 33.

Deming, E. W. (1982). *Quality, productivity, and competitive position*. Cambridge, MA: MIT Center for Advanced Engineering Study.

Feigenbaum, A. V. (1991). *Total quality control*. McGraw-Hill.

Fiaz, M., Ikram, A., & Ilyas, A. (2018). Enterprise resource planning systems: Digitization of healthcare service quality. *Administrative Sciences, 8(3),* 38.

Flodgren, G., Gonçalves-Bradley, D.C. & Pomey M.P. (2016). External inspection of compliance with standards for improved healthcare outcomes. *Cochrane Database of Systematic Reviews* 2016, 12

Fønhus, M.S., Dalsbø, T.K, Johansen, M., Fretheim, A., Skirbekk, H., & Flottorp, S.A. (2018). Patient-mediated interventions to improve professional practice. *Cochrane Database of Systematic Reviews* 2018(9). Art. No.: CD012472.

Fotso, J.C., Mukiira, C. (2011). Perceived quality of and access to care among poor urban women in Kenya and their utilization of delivery care: harnessing the potential of private clinics? Health Policy Plan, *27(*6), 505–515.

Fredriksson, M., Halford, C. & Eldh, C. A., Tobias Dahlström1, T., Vengberg1, S. Wallin L., & Ulrika Winblad, U. (2017). Are data from national quality registries used in quality improvement at Swedish hospital clinics? *International Journal for Quality in Health Care*, 29(7), 909–915

Government of Kenya. (1994). *Kenya's health policy framework.* Ministry of Health.

Government of Kenya. (2007b). *Kenya Vision 2030.*Government of Kenya.

Government of Kenya. (2010). *The Constitution of Kenya.* Government of Kenya.

Government of Kenya. (2013). *Millenium Development Goals: Status Report for Kenya.* Nairobi: Ministry of Devolution and Planning, Government of Kenya.

Government of Kenya. (2014a). *Kenya Health Policy 2014-2030.* Ministry of Health, Government of Kenya.

Hysong, S., Best, R., Pugh, J., (2006). Audit and feedback and clinical practice guideline adherence: making feedback actionable. *Implement Sci*,*1*(9), 1-9.

Juran, J. M. (2004). *Architect of Quality*. New York, NY: McGraw-Hill.

IOM (2000). *World Migration Report, 2000*. International Organization for Migration (IOM)

Kaoru, I. (1985). *What is total quality control?* Prentice-Hall.

KEMSA Taskforce Report, (2020). *Strategic planning practices by Kenya medical supplies agency*.

Leatherman, S., Ferris, T.G. & Berwick, D. (2010). The role of quality improvement in strengthening health systems in developing countries. *Int J Qual Heal Care*, *22*(1), 237–243.

Magutu, P. O., Aduda, J., & Nyaoga, R. B. (2015). Does supply chain technology moderate the relationship between supply chain strategies and firm performance? Evidence from large-scale manufacturing firms in Kenya. *International Strategic Management Review, 3*(1), 43-65.

McGivern, G., Nzinga, J., & English, M., (2017) 'Pastoral practices' for quality improvement in a Kenyan clinical network. *Social Science & Medicine, 195*(1),115-122.

Mold, J. W., & Peterson, K. A. (2005). Primary care practice-based research networks: working at the interface between research and quality improvement. *Annals of family medicine, 3 Suppl 1*(Suppl 1), S12–S20. https://doi.org/10.1370/afm.303

Mugo, L. S., & Nzuki, T. (2019). Conceptualizing the integration of ehealth with egovernance in a developing country. *Information Resources Management Journal (IRMJ),34*(3), 64-78.

Mukabana, B. Nancy Khayeli, N. & Adegu. W. (2018). Improving long acting and reversible contraceptives uptake using quality improvement strategy at a sub-county hospital Kenya. *International Journal of advanced Research* (IJAR) *6*(8), 774-782

Murkomen, O. K. (2012, October 24). Devolution and the health system in Kenya. Retrieved February15, 2017, from *Health Policy Project*: https://www.healthpolicyproject.com/ns/docs/Kenya_Kipchumba_Presentation.pdf

Mutua, J. (2014). *Quality management practices and financial performance of cement manufacturing firms in Kenya*. (Unpublished MBA Project), University of Nairobi.

Mwaambi, P.R. (2017). Universal health care coverage: Healthcare financing and access to health care services in Kenya. *Clinical Case Reports and Reviews*, *3*(10), 1-3.

Noël, G., Joy, J. & Dyck, C. (2017). Improving the quality of healthcare data through information design. *Information Design Journal,23*(1), 104–122.

Oleribe, O. O., Momoh, J., Uzochukwu, B. S., Mbofana, F., Adebiyi, A., Barbera, T., Williams, R., & Taylor-Robinson, S. D. (2019). Identifying key challenges facing healthcare systems in africa and potential solutions. *International Journal of General Medicine*, *12*(1), 395–403.

Omidvari, A.H., Vali, Y., Murray, S.M., Wonderling, D., Rashidian, A. (2016). Nutritional screening for improving professional practice for patient outcomes in hospital and primary care settings. *Cochrane Database of Systematic Reviews* 2013(6) doi: 10.1002/14651858.CD005539.pub2.

Opon, S. O. (2016). Provision of essential health package in public hospitals: A case of Homabay Countyhospitals, Kenya. *The Pan African Medical Journal*: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4992368/

Otieno, P.O., Wambiya, E.O.A., & Mohamed, S.M. (2020). Access to primary healthcare services and associated factors in urban slums in Nairobi-Kenya. *BMC Public Health,20*(1), 981 https://doi.org/10.1186/s12889-020-09106-5.

Oyaya, C.O., & Rifkin, S. B. (2003). Health sector reforms in Kenya: An Examination of district level planning. *Elsevier Science Ireland Ltd*: http://www.healthpolicyjrnl.com/article/S0168-8510 (02)00164-1/abstract

Shortell, S.M., Bennett, C.L., & Byck, G R. (1998). Assessing the impact of continuous quality improvement on clinical practice: What it will take to accelerate progress. *The Milbank Quarterly*, *76*(4), 593-624.

Smyrnova, T. (2020). *Healthcare industry challenges 2020*.https://upplabs.com/ healthcare-industry-challenges-2020/.

Stasha, S. (2021). The state of healthcare industry – Statistics for 2021.Retrived on 7/12/2021from https://policyadvice.net/insurance/insights/healthcare-statistics/ .

United Nations Development Programme. (2016, September 14). *Kenya government gives road map to implementation of SDGs*. United Nations Development Programme http://www.ke.undp.org/content/kenya/en/home/presscenter/pressreleases/2016/leave-no-one-behind-- kenya-government-gives-road-map-to-implemen.html

Walsh, K., Helm, R., Aboshady, O.A. (2016). Quality improvement in health care: how to do it. *Br J Hosp Med (Lond),2*(9), 536-538.

WHO, (2011). Abuja declaration 10 years on. https://www.who.int/healthsystems/publications/Abuja10.pdf

WHO, (2017). Primary health care systems (PRIMASYS): Comprehensive case study from Kenya. *World Health Organization Report.* Geneva.

WHO, (2018). The african regional health report: The health of the people. *Bulletin,* 96.

WHO, OECD & World Bank (2018). Delivering quality health services: *A global imperative for universal health coverage*. Geneva.