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Abstract

Purpose: A clinical audit is a quality improvement process that seeks to improve patient care and outcomes through a systematic review of care against explicit criteria and the implementation of change. Although much important work has been documented regarding Clinical Audit, several questions concerning the methodology of this approach in various healthcare facilities and contexts remain unanswered. Hence, the purpose of this study is to describe an appropriate way to implement a Clinical Audit strategy in a healthcare organization in the UAE.

Design/Methodology/Approach: A review and critical analysis of the comments from key staff members working in the quality control departments in healthcare facilities through semi-structured *internet calls interviews Using Ms Teams*. The application was conducted based on the action research methodology. The interview questions were developed by listing the topics related to particular research questions and reviewing the previous literature.

Findings: certain fundamentals for the implementation of Clinical Audit strategy needed to secure a successful implementation of the strategy; developing a Clinical Audit policy, Clinical Audit training, and building a Clinical Audit annual plan, can provide a solid structure for the strategy. Key stakeholder engagements such as facility leadership and quality control staff members have a significant impact on Clinical Audit strategy implementation success. However, a cautionary note is forwarded suggesting that practitioners need to be fully aware of the potential setbacks present in implementing the strategy. Thus, the usefulness of the Clinical Audit strategy framework may depend upon an individual health care facility's quality improvement needs.

Value: This paper provides guidance to healthcare facilities regarding the appropriate approach to implement the Clinical Audit strategy. Healthcare facilities need to work continuously with

patients' needs in order to thrive. This study will also serve as a basis for further research, focusing on the effects of Clinical Audit on the improvement of patient care and provided services.

Keywords: Clinical Audits, Quality Care, Patient Experience, Clinical Governance, Quality improvement, Quality in healthcare

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Chapter 1 Introduction

1.1. Introduction

Clinical audit is a healthcare assessment procedure that aims to assess if the healthcare provided is in line with guidelines and standards, and patients are aware of the level of quality of care delivered (National Health Service, 2016). Previously, the National Institute for Clinical Excellence (NICE) has defined a clinical audit as a quality improvement process that seeks to improve patient care and outcomes through a systematic review of care against explicit criteria and the implementation of change (National Institute for Clinical Excellence, 2009). Services provided are evaluated to identify areas that require attention. A clinical audit cycle consists of four stages, as described by the Healthcare Quality Improvement Partnership (HQIP) in 2010. They are the preparation and planning stage, measuring performance, implementing change, and sustaining improvement (repeated cycle). Ideally, a clinical audit can improve patient care, reduce risks, and continuously monitor services to maintain a high quality of care.

A clinical audit highlights the discrepancy between established standards and actual practice to identify areas of change and potential care quality improvements. The initiative outlines the importance of performance evaluation and reliability, as well as the need for confidentiality. Thus, the audit process is a quality loop that evaluates current clinical practice and outcomes against measurable criteria and standards and generates goals for improvement. As mentioned earlier, the audit process is carried out using the four stages described by the Healthcare Quality Improvement Partnership (HQIP), including the preparation and planning stages. Other areas important in the review of clinical facilities include measuring performance, implementing change, and sustaining improvement.

Guidelines provide more possible benefits to patients, healthcare professionals, and welfare organizations by supporting decision-making and enhancing the efficiency and quality of health

services while reducing exercise variance. However, many population-based studies have shown that guideline execution is complex and challenging because of the influence of several multilevel factors such as the patients, suppliers, and the hospital management system. Over the last three decades, significant research projects have been undertaken to determine proper single or multifaceted procedures for applying training guidelines that would facilitate the provision of care. While some of these procedures are likely to affect healthcare delivery, results have been moderate and contradictory. Given the crucial role of guidelines in interpreting scientific information, more research is needed to create knowledge on optimizing guideline implementation and use.

Similarly, the application of recommended guidelines and clinical knowledge has so far facilitated the refinement of some day-to-day practices in a typical clinical care setting. It uses scientific data gathering methods to promote understanding of impacts due to the daily healthcare practices. Impact assessment is a way to measure outcomes brought about by the implementation of a guide which involves investigations into the various steps undertaken during care.

1.2. Clinical Audit

Audits are a quality improvement approach and one of the seven pillars of clinical governance. They permit organizations to continually move towards improving service quality by evaluating the current position, implementing improvement plans, re-auditing, or stopping this accounting cycle to see if any beneficial change has occurred. Quality improvement (QI) proposes to change the patient experience. Although an audit is much more clinically oriented, QI concentrates on more holistic topics (Gillam et al., 2013). The clinical accounting procedure was first introduced in 1993 by Great Britain's Human Health Company, the NHS. The primary aim of clinical auditing is to determine whether the level of quality of the given care for the patient has changed or improved.

A critical issue in the clinical accounting method is ensuring that everything has been completed as per the predefined process and, if not, introducing ways for this to occur. Both the quantitative and qualitative approaches are considered for this investigation activity. The quantitative approach examines fundamental dimensions that promote the clinical accounting method, yet these quantitative approaches may reveal a hospital care's hidden truths. The analysis methods can challenge the accuracy and impact of clinical audits. Outcomes are recorded as evidence to show all the clinical audit subjects.

Figure 1 below describes all four stages of the clinical audit cycle. Phases of the clinical audit cycle as defined by the Healthcare Quality Improvement Partnership (HQIP) are:

1. Preparation and planning stage:

The clinical auditor must identify the need for conducting an audit, making sure that the selected topic, quality improvement method used, and the aim and objective of the clinical audit project are precise. Compare the current practice with similar ones, for which staff is prepared and trained.

2. Measuring performance

At this stage, it is essential to define the type of data set to be collected, the population, the analysis method used to analyze data, and where it will be saved for confidentiality purposes.

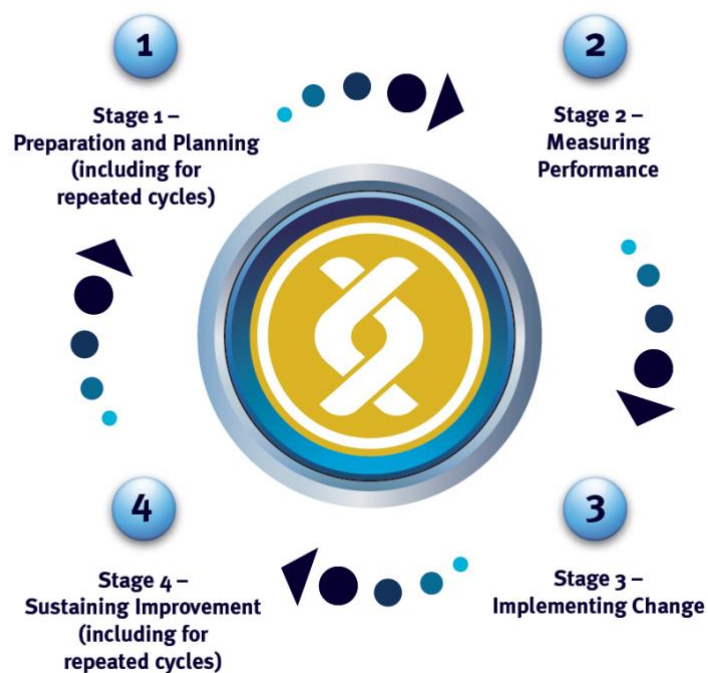
3. Implementing change

After drilling down and measuring performance, the clinical audit results are shared with all stakeholders, staff, and teams involved. If the results show non-compliance, an action plan should be drawn up with the participation from all stakeholders. Improvement can be designed in the shape of process mapping, introducing tools, using "Plan-Do-Study-Act" (PDSA), Six Sigma, or Lean Six Sigma. It is essential to obtain leadership approval/sign – on the action plan before implementing it.

4. Sustaining improvement (repeated cycle)

To complete the clinical audit cycle, a re-audit is required to measure the improvement/change level and the successful implementation of the action plan. The outcome of the re-audit should be shared with stakeholders.

Figure 1, Clinical Audit process for Improvement (Healthcare Quality Improvement Partnership, 2016)



The clinical audit cycle has been modified over the past years. This modification has addressed the relationship between the clinical audit and other quality improvement tools and has helped healthcare professionals understand and appreciate this relationship. Over the past few decades, tools such as Six Sigma and Lean have found their way into the health care environment, where they have been used to improve the quality of care provided to the patients. Staff knowledge and understanding of the quality improvement process have also changed; they have become more focused on how and what tool to use for testing and improving the quality of care (Healthcare Quality Improvement Partnership, 2016).

1.3. Clinical Governance

Clinical audits advance the efficiencies in clinical governance. Components in this Clinical Governance model required for health service organizations that want to meet the requirements of national standards when they are accredited include local standards of the country such as those from the Department of Health (DoH), and the international standards of the ISO, and the Joint Commission International (JCI). Each health delivery organization needs to put in place strategies to fulfil the requirements of these standards criteria for clinical administration that take place in its local conditions.

The objective of governance theory is built on the national and international measures, offering more knowledge about clinical governance and the roles and responsibilities of staff within the health service organization. Additional resources also support the Clinical Governance model for particular target audiences and contexts (Heras, 2018). The development and implementation of a clinical audit is a process that will require the creation of a clinical audit strategy, a document intended for all the staff working in Abu Dhabi Healthcare Services Company (SEHA). It involves creating a picture of where the organization wants to be in the future to develop and implement a clinical audit and a document to support staff capability, capacity, and commitment.

A commitment to be a learning organization is emphasized in the SEHA strategic plan. SEHA will need to encourage and support learning and self-development at all levels for all staff members as a part of a continuing professional development plan. This strategy will also aim to consolidate what we currently have at the SEHA corporate Clinical Quality Review team, which will establish good practice, monitor it, and anticipate any changes because of the result of the implementation of this strategy. The overall aim of the development and implementation strategy

is to support individual teams and improve organizational learning to assist SEHA in order to meet its vision and objectives.

Education, learning, and staff engagement are essential parts of the development, successful devising, and implementation of the SEHA Clinical Audit Strategy. These should support health improvement and future planning for service provision. These should also support safe care delivery to service users and sustain continuous improvement methodology for SEHA and other staff working within.

1.4. The Rationale for the Study

I am currently working in the public healthcare sector in the United Arab Emirates, at Abu Dhabi Health Service Company (known as SEHA), where this research will be implemented. SEHA aims to have multiple improvement tools available for use in all its facilities. These tools will serve as devices that are ready to be used when improvements are required. The project specification and staff capability to implement the changes dictate what type of tool needs to be used. Tools such as Plan-Do-Check-Act (PDCA), Lean, Six Sigma can be used. SEHA also decided to embed the clinical audit process for improvement in all SEHA healthcare facilities (HCF's) and review current practices against explicit criteria, guidelines, or policy, and benchmark the outcome, internally within SEHA and externally with other similar organizations. It started with creating a clinical audit strategy and the implementation of that clinical audit plan for the improvement and the undertaking of a pivotal role in the research involving investigations into the effectiveness of the clinical audit process.

However, the development and implementation of a clinical audit is a process that will require the creation of a strategy intended for all staff working in SEHA as a guide on how to implement a clinical audit to measure care and subsequently drive its improvement. The clinical audit leads in each SEHA HCF will need to implement the strategy and conduct the training, with overall

governance from SEHA corporate quality team to support the application and make sure issues such as consistency, duplication, transparency, validity, confidentiality, and addressing poor practice are addressed.

The knowledge and skills in improving the care is owed to my experience of delivering clinical audit projects in the past, providing training for healthcare staff on how to conduct a clinical audit, developing clinical audit guideline/policy, and generally being motivated about improving healthcare services through the implementation of clinical examination. This guided me forward delivering this task.

The importance of this research to my current organization is that it can help the quality team introduce an improvement to the care SEHA currently provides and fulfil the internal requirements (standards and guidelines) as provided in the organization objectives (SEHA 2020) and external requirements (Joint commission international JCI, ISO standards for quality 9001) (Heras, 2018), and facilitate benchmarking against similar organizations. It was proposed by SEHA leaders to develop a clearer vision when it comes to improving care by using the Clinical Audit Strategy, which serves as a guide to healthcare professionals for using specific standards to improve care.

A Clinical audit can help improve care aspects provided to patients in different areas and support any changes to care. It can also define, evaluate, and measure improvements. Healthcare staff can identify and measure risks at their units. The clinical audit can be enhanced by providing up-to-date practices to healthcare professionals, and it has been linked strongly with professional practice (Collis, 2006) (Ledingham et al., 2017). Other key stakeholders are the United Arab Emirates department of health (DoH) that has requested – during the recent inspection – from all healthcare facilities to make healthcare providers accountable for the implementation of quality measures through improving the clinical audit activity at their facilities and to develop a clinical

audit guideline/policy and a plan with identified critical areas for improvement (Department of Health, 2017).

1.5. Details of the Project

From the study's elaborated rationale, one appreciates the need to understand how people become ill, their perceptions, their behaviours, and experiences concerning health and the effect of coping with the illness. The provision of knowledge of new techniques in managing health sectors, which can improve the quality and condition of health services provided to its population and sustain it, so significantly improving the overall experience (Palfrey, 2004). Delivering a high level of care is complicated. It is one of the main concerns for hospital management at all levels. Managers try to attain high standards of quality in hospitals, as well as patient satisfaction while ensuring that the attainment of the organization's mission and vision are always assured. Ideally, the quality in the public health sector is seen as the right of all service users, and it should, therefore, be provided.

Over the years, different tools have been developed for achieving quality improvement. For example, Walter Andrew Shewhart developed the Statistical Process Control (SPC) during World War II. SPC uses statistical tools to monitor the production line's performance to predict significant differences that may result in rejected products. Later, other tools such as Total Quality Management, Six Sigma, Lean thinking, Clinical Audit cycle were devised to improve the provided care. Earlier strategies uncovered lessons, such as the relevance of proper coordination, which is now integrated into the assessment guide proposed at SEHA.

Since the need for improving the quality of the care at Abu Dhabi Health Service Company (SEHA) has arisen, the current plan is to introduce a new clinical audit process for improvement across all its HCFs. The latest audit plan is expected to better serve the needs for improvement, and the position is as per the initial assessment of SEHA HCF's current approach to clinical audit.

The success of the new audit plan should help determine standards for similar organizations such as National Health Services (NHS) in the United Kingdom. This study aims to develop a Clinical Audit Strategy that will shape the clinical audit process for improvement in the Abu Dhabi Health Service Company (SEHA).

SEHA, an independent healthcare provider, established by Emiri Decree No. 10 of 2007, owns and operates all public hospitals and clinics in Abu Dhabi, Al Ain, and Al Dhafra Region (previously known as Western Region). SEHA is the largest healthcare provider in the United Arab Emirates (UAE), providing a range of care, and using leading-edge technologies.

Following public demand for better quality care and the need to cut down on health expenditure, the government instructions are to revive the clinical audit to achieve a higher level of transparency and accountability, improving the quality of care as the primary process for improvement. It was agreed upon at the SEHA corporate office to investigate and build a plan to revive it. The corporate Quality team (QT) has decided to develop a clinical audit strategy that will guide clinical audits across all SEHA systems.

Chapter 2: Objectives and Literature Review

The previous chapter introduced this study. It defines what clinical audit is and how it can contribute to the improvement in care. The rationale for this project is to help SEHA fulfil national regulatory requirements by implementing a clinical audit strategy that can lead to an improvement in the provided care. Moreover, it briefly discusses the study design and methodology.

Assessment and improvement of the quality of care offered to patients is of critical importance in day-to-day clinical practice. The rate of change also informs health policy design and funding. Several instruments have been developed, including incident analysis, health field assessment, and clinical examination. Below listed are the objectives for the study.

2.1 Objectives

- To identify the standards and criteria for clinical audit.
- To identify staff understanding of the current practices.
- To identify requirements for implementing a clinical audit.
- To evaluate crucial clinical changes and protocols that allow improvements in care quality.
- To identify means to analyze the results and disseminate findings to health care providers and hospital management for effective clinical audit implementation.

The importance of setting the objectives is that they allow the implementation process and the approach to achieve the intended outcomes to remain focused on the study. The outcomes allow a close description of the quality aspects to be measured to show the achievement. However, there is a need to be careful in balancing the objectives with elements of care assurance that enhance project quality management. Step by step goals help widen the scope of the study and the focus on the process of improvement (Benjamin, 2008). Thus, the objectives are to be

implemented in systemic stages since the process allows time for changes to become embedded in clinical practices across SEHA.

2.2 Research question

What are the requirements needed to identify and implement a clinical audit strategy at Abu Dhabi Health Service Company (SEHA)?

2.3 Research statements

The purpose of the current study is to identify the benchmarks and provide a process to monitor and improve the performance at Abu Dhabi Health Service Company (SEHA) by highlighting the importance of systemic clinical audits.

2.4 Benchmarks

Measurements of quality and safety make the development of quality improvement initiatives using external benchmarks possible. Benchmarking in healthcare is defined as the continuous and collaborative discipline of evaluating and comparing the effects of significant business processes with those of the most outstanding performers in measuring organizational performance. There are two types of benchmarking that can be applied to measure patient safety. Internal benchmarking is often used to analyze and describe the best practices within the organization, and to examine the actual knowledge over time. Data recorded during benchmarking can be plotted on a power chart where statistically derived upper and lower power limits are determined. Nevertheless, applying just internal benchmarking does not necessarily describe the best practices elsewhere.

In investigating performance, this study implemented process benchmarking. It is all about better understanding of the operations, comparing process against internal and external benchmarks,

and finding ways to optimize and change the functions. The idea is that, by realizing how high performers accomplish functions, it will be easy to find ways to make operations more effective, faster, and more efficient. This study will use an action research methodology as a guiding framework for reflecting on problem-solving practices. It will lead to the formation of a framework to drive the development of a clinical audit strategy to sustain healthcare improvement through the reflective spiral steps of action research (figure 4), (Parkin, 2009) (McNiff, 2010).

In the study, guidance for developing and introducing a clinical audit strategy to make a healthier and more effective tool for improvement across all SEHA HCFs will be provided. The purpose of this research is to investigate requirements and build a plan for a clinical audit cycle by identifying elements that can help and support reshaping the clinical audit cycle. It should help the staff leading a clinical audit project to be more focused, facilitate the identification of projects, gain better outcomes, and be more specific with objectives and actions. Staff Nominated by SEHA healthcare facilities (HCFs) will be involved in creating the clinical audit strategy. Their contribution level will be determined by their capacity and level of knowledge of the clinical audit process. Following the successful implementation of the clinical audit strategy, it is intended – after completing this project – to propose a plan that will lead to the performance of a SEHA system-wide clinical audit project as part of a Doctorate in Professional Studies (degree). The project selection will be based on SEHA priorities.

Also, considering that the UAE is a comparatively young country established as a federation of seven emirates in 1971, it is evident that the collective impact of the well-being of these nations has increasingly allowed the region's leadership to deliberate on development plans that further strengthen their national unity, foster more significant economic development, and promote heightened levels of well-being and personal health.

In the UAE, only half of all the new born babies survived across the region, while a third of the mothers died during delivery in 1961. The data collected since 1961 confirms that the health system has increasingly improved over the 60 years and has even surpassed services provided in some developed countries. The rate of maternal death and infant mortality has fallen while life expectancy has grown over the years. The rapid economic growth experienced in the region has caused the transformation of the healthcare system leading to an increase in the number of healthcare professionals and healthcare facilities. The UAE healthcare budget increased by 10% between 2011 and 2015, accounting for over US\$ 11 billion in expenditures. This study seeks to have an overview of the ways in which the implementation of a clinical audit process has resulted in improvement in a clinical setting.

The UAE has since established a comprehensive set of healthcare goals under the *National Agenda (2021)* that outlines the pathway to achieving specific healthcare system targets (UAE National Agenda, 2021). The UAE national strategy outlines the need for enhanced performance in the healthcare system and its citizens' health. The objectives also outline the need for regulatory requirements and the organizational and structural goals in healthcare systems.

The country further resorts to creating ambitious healthcare programs that address quality challenges, cost, and improvement of health services. These reforms have been crucial in that they facilitated the growth of health provisions against the backdrop of the prevalence of chronic diseases and the rapid population growth (UAE National Agenda, 2021), promoting this project's work and implementation of any future recommendations. Through the development of the clinical audit strategy, the level of care will be enhanced and subsequently lead to improved quality of life.

2.5. Population Health

The study by Erik (2017) highlights that the UAE is a fast-growing nation, characterized by a young population. The population is marked with high proportions of male expatriates from within UAE, and this number has grown to over 9 million from about 70,000 in the 1950s. The average life expectancy has also increased by over five years to reach 77 years. The uniqueness of the UAE population characteristics plays a vital role in developing and realizing the set health strategies and policies. The country has prioritized occupational health services, health promotion, preventative services, youth services, and child and maternal health services (Erik, 2017). The study by Erik (2017) also highlights a second epidemiological transition in the health care system, following the decline of chronic or non-communicable diseases.

2.6. The Burden of Disease

Studies conducted in the UAE show a set of challenging objectives the government aims to achieve in its 2021 vision. The country seeks to reduce further the risk factors, mortality, and morbidity in the UAE. The targets focus on reducing the number of deaths related to healthcare conditions, improving diabetes care, and increasing life expectancy. The country has made tremendous progress in terms of reducing infant mortality rates and increasing life expectancy. Nevertheless, the government faces new challenges related to the rise in non-communicable diseases such as cancer, cardiovascular diseases, and diabetes.

The country is making progress in controlling and preventing infectious and non-communicable diseases with a strong focus on surveillance, immunization, mandatory reporting, and effective treatment. The World Health Organisation (WHO) estimates that non-communicable infections lead to over 66% of all annual deaths worldwide, with cancer, injuries, and cardiovascular diseases leading the list. The situation is the same in the UAE, prompting adequate care interventions (World Health Organisation, 2014).

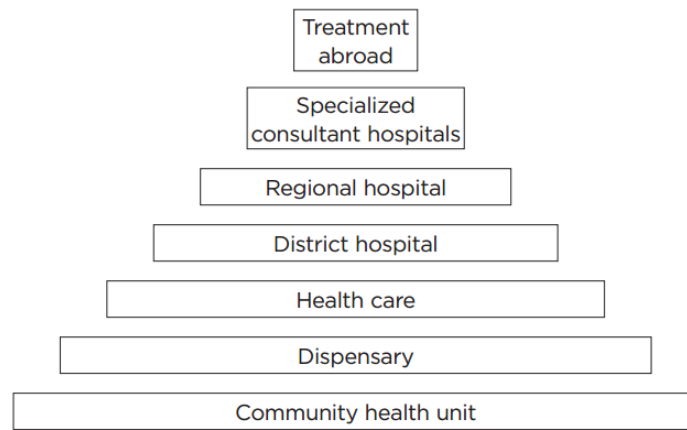
The UAE government aspires to improve the healthcare system's quality and outcomes to work towards accomplishing its goal of establishing a world-class health system. The review of the study area becomes essential to reveal the level of government commitment in informing clinical guidelines. The clinical audit's relevance will also help the government answer more quality improvement questions in the sector.

2.7. Health Care System

The health care system in the UAE is well developed. It is able to cater for the regional population with excellent coverage of the population demographics. It is structured so that the government has the upper hand in enforcing changes, with the cornerstone of the referral hierarchy being a pyramidal pattern. Through the Ministry of Health, the government has heavily invested in the sector, with many public health facilities currently operating in strategic areas across the UAE.

The lowest level of the community centre's health care system provides essential preventive services to the local population in the UAE. The position is then followed by other dispensary services that serve a larger population in respective areas. Care practitioners at a dispensary facility may include a medical aide and a nurse/midwife who provides essential obstetric services to the respective communities. The hierarchy (Figure 2) moves on to a health centre that serves an even larger population in the administrative district. The facility may include beds and delivery services and is run by midwives, nurses, and clinical officers. The hierarchy then moves to the district hospital and regional hospital that serves the population with specialized care services. The largest hospitals are the *consultant hospitals* at the top of the pyramid in the Ministry of Health (Mohammad, 2016).

Figure 2. The pyramid in the Ministry of Health (Mohammad, 2016)



2.8. Human Resources

Like most institutions worldwide, the health sectors in the UAE are looking at a shortage of human resource personnel at all operation levels. The available healthcare professionals in public facilities make up about 48% of the total population's required number, therefore, creating only half the number required. During its development phase, the UAE government made an employment freeze, and this retrenchment policy resulted in a sharp decline in the number of healthcare workers in the region (UAE National Agenda, 2021). Such challenges are also seen in clinical staff shortage in SEHA, which will affect the implementation of quality improvement initiatives, such as a clinical audit.

2.9. Health Financing

Health financing is a top priority of the UAE government, with the budgetary allocation more than doubling between 2003 and 2008. The collective government spending in health care currently stands at about 14% of the national budget. The government has not sufficiently funded the sector due to other priorities. However, programs have been created to enhance the utilization of available resources and reduce the financial gap between regions to promote uniformity of healthcare services quality and availability across all sectors (UAE National Agenda, 2021).

The UAE government has also enforced policies on mandatory insurance services for all expatriates and nationals, which have been critical in driving healthcare improvements during the start of the year 2007. The insurance caters to expatriates under two schemes (Basic and Enhanced), while the local UAE residents have one (Thiqa). The government records that the average cost of insurance claims in 2011 levelled at \$105, and with over 15.3 million requests processed that year, the tally brought forth US\$ 1.6 billion settlements. The settlement has grown to over 25 million insurance claims in 2019, with a projected steady rise in the settlement package (UAE Health insurance, 2020).

WHO estimates that healthcare expenditures in UAE, almost a quarter of 2010 expenditure, were spent sending citizens overseas. The expenses involved advanced medical care for those with strained resources, especially those that required critical care. Many patients sponsored by the Dubai Health Authority (DHA) and Health Authority Abu Dhabi (DOH, previously known as HAAD) go overseas for medical treatment. The numbers are increasing each year, even among the referral sources in the UAE.

The country is also working to welcome medical tourists to its medical facilities, with over half a million people reportedly visiting Dubai in 2012. Compared to other countries in the region and the rest of the world, UAE policies have significantly subsidized the out-of-pocket (OOP) healthcare spending for its citizens. To stay afloat, clinical guides informed by best practices come in handy. Generally, there is a need to improve clinical interventions while maintaining standards, therefore, calling for increased refined processes, which should affect quality improvement initiatives, such as a clinical audit.

2.10. Abu Dhabi Health Service Company (known as SEHA)

SEHA is the primary concern in this study and is located within the study region of UAE, having operations spread out across the entire area. Abu Dhabi Health Services Company, otherwise

known as SEHA, is a stock company that is independently owned and operated to manage public clinics and hospitals across the UAE. 'SEHA' means health in the Arabic language.

SEHA was established in 2007 by Emiri Decree No. 10 and has since grown to become the leader of reforms in the Abu Dhabi healthcare sector. The company was launched to oversee hospital operations and seek incentives that upgrade and improve the delivery of healthcare at public facilities and create uniqueness in the rest of the world. The company approach began by distinguishing between the regulations and management. SEHA is responsible for overseeing the management of public hospitals and healthcare centres.

It is also responsible for promoting healthcare practices in the region and ensuring that public care facilities explore competitive care improvement ideas that create the best global practices. The company seeks to partner with international healthcare institutions to enhance the integration, growth, and development of UAE healthcare systems to ensure the attainment of world-class capabilities improved through education, knowledge transfer, excellence, and the achievement of goals with a competitive edge.

The company has increasingly sought to implement developments in more sophisticated areas to maximize partnership agreements to bring about fully-fledged programs and operations in public care facilities. SEHA consists of 12 hospitals with 2,644 beds, 46 Primary Healthcare Clinics, 10 Disease Prevention and Screening Centres, 3 Mobile Clinics, 1 School Clinic, 2 Blood banks, 4 Dental Centres, 2 Employee Healthcare Centre, and 1 Vaccination Centre. It is the largest healthcare provider in the United Arab Emirates (UAE), providing a range of healthcare services, and using leading-edge technologies. SEHA's healthcare facilities can accommodate up to 100,000 inpatients and conduct 41,000 surgeries, in addition to treating more than 5,000,000 outpatients annually. It has more than 17,500 employees. The institution is the single most extensive network in the UAE that utilizes leading-edge technologies in delivering a

continuum of care to UAE citizens. The institution employs many employees across the country from the Eastern Region to Al Dhafra and the Western Region throughout the Island and Middle Regions.

2.11. Clinical Audit Strategy

The process of conducting the clinical audit involves a comparison of actual practices against the specifics stipulated. The clinical audit strategy identifies the crucial topic for consideration, after which stringent criteria are selected based on the intended outcome in line with measurable objectives, clinical evidence, and vital aspects of care. The rules are focused on patient expectations and care outcomes through the implementation of the clinical audit strategy. In many cases, the developed standards heavily borrow from the UAE local and national service frameworks. In the absence of evidence to guide the development of these standards, the regional consensus stipulated the expected practice outcomes (Benjamin, 2008). The strategy is to help identify areas of practice improvement, after which the audit can formulate standards that will progressively help improve care to the expected level.

The extent of inefficiencies or resource constraints in many facilities prevents the implementation of effective clinical audits. Addressing the absence of the clinical audit team requires greater accountability as well as stable clinical hierarchical structures. Such inadequacies in accessing scientific evidence may prevent the implementation of suitable clinical practices. The study will investigate the possible performance of a criteria-based audit in which the benchmark standards are designated on explicit criteria by stakeholders in care (Gnanalingham et al., 2001). The clinical audit strategy hypothesis is that specific changes can lead to enhancement in SEHA and its HCFs' clinical practice through the implementation of the strategy.

The criterion-based strategy focuses on practitioner strengths to set realistic goals on quality improvement. The process involves the adoption of external guidelines in manipulating the internal resource environment effectively. The benchmark standards should be based on relevant clinical practice, ease of outcome measures, the strength of clinical evidence, and the facility's capacity and resources to fully implement the recommendations (Paton et al., 2015). The local team's involvement in reflecting current clinical practices and setting benchmark standards proves crucial in effectively assessing care improvements.

The SEHA clinical audit activity was established in 2006 during the government of Abu Dhabi's substantial welfare system reforms. This regulatory procedure (the duty of health agency Abu Dhabi) was split from service provision (the obligation of the Abu Dhabi health service organization, SEHA) (Salah et al., 2019). Since 2006, SEHA has gone through many changes that ruined the role of clinical audit as a process for improvement in some of its HCFs. Thus, this study will assess current clinical audit activity at SEHA HCFs, support the re-establishment of clinical audit activity, and the development of a standardized clinical audit strategy framework across SEHA and its HCFs.

Chapter 3 Methodology

The previous chapters highlight the needs and requirements for this study; this chapter discusses the study's research question and key intended objectives. Additionally, it defines the location and the care setting (SEHA) where this study takes place, and the study participants and the data collection methods used. The process of analysis, along with the ethics of the study and the limitations encountered by the researcher, are described. There is a detailed background to the health system in the UAE, which also elaborates the needs for this project to be conducted.

3.1. Project Design and Methodology

This study questions the requirements for the development of a clinical audit strategy and aims to explore the options that can be used for its development in SEHA and its HCFs. The study questions should guide the researcher to decide which research method should be used.

According to Bryman (2004), there are five types of research designs: experimental, cross-sectional, longitudinal, case study, and similar models. After examination of the literature and the research question, it was agreed that the most suitable method for this study was an action research methodology, where the researcher and participants would engage and interact to obtain the required information for the development of the clinical audit strategy in SEHA. Also, it could be used as a guiding framework, and the study could contain quantitative and qualitative data as part of the research design. An action research methodology is a process where participants and researchers examine their clinical practices systematically and carefully. The participants then use research techniques, interact – to a certain extent – to help the research achieve its objective, explain their role and facilitate clinical audit activity to improve the quality of care they provide to their patients.

3.2.1. Action Research

This study uses action research methodology as a guiding framework for reflecting on the current practices to problem-solving; this should lead to the development of the structure to drive the growth of the clinical audit strategy and to sustain the improvement in provided healthcare through the reflective spiral steps of action research (figure 3) (O'Donnell et al., 2016). Action research is about a researcher's mission to improving specific areas of practice, where participants play a crucial role in achieving the intended outcome under the guidance of the researcher. Action research, as a method of investigation, is ideally designed to identify weaknesses in order to improve professional practice. It can involve systematic observation and data collection, which is then used in reflection, decision making, and more productive work strategies (Parsons et al., 2002). Calhoun (1994) aptly described action research as a way of saying, "*let us study what is happening and decide how to make it better.*"

Action research can be described as a line between hypothesis testing and managing improvement projects. The aim here is for stakeholders such as clinical audit practitioners and quality staff to work together with the researcher as learning partners, learning from previous experiences with an aim to make changes and improvements to the practice, then use it to support future decisions made by senior leaders of the organization. So, the need for defining time and date for reflection, and intending to improve healthcare services is a crucial part of action research. The table below (figure 3) compares action research with applied and conventional research approaches (Hilary, 2015) (Holmes et al., 2016).

Figure 3. Action Research Methodology (O'Donnell et al., 2016)

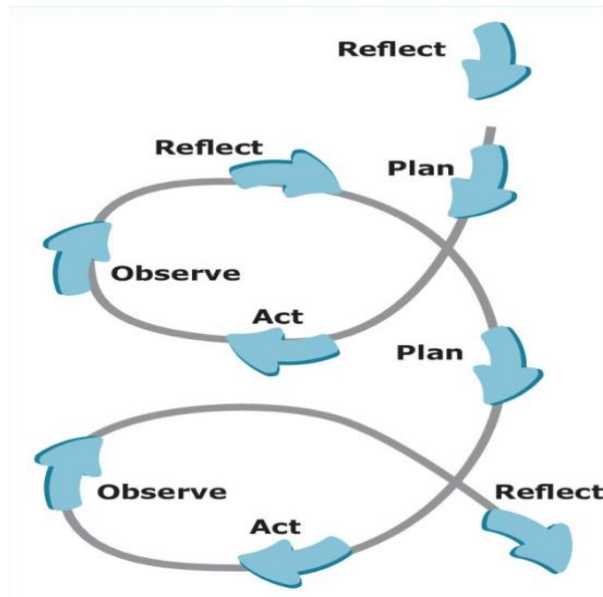
	Action research	Applied patient research	Conventional health research
Purpose	To understand and improve	To improve	To understand
Basic (power) orientation	Inquiring "with"	Inquiring "for"	Inquiring "about"
Researcher (decision-makers)	Embedded. Problem co-definer, learning co-designer, co-implementer	Expert who knows what good outcomes should look like and helps to move situation towards them	External to the context. Problem definer, research designer, research implementer
Stakeholders (patients)	Problem co-definers, research co-designers, research co-implementers	Sources of data; clients of research	Subjects of the research; sources of information; samples for testing conclusions
Evidence	Experiential, partial, emergent, dialogic, intuitive. Qualitative and quantitative. Includes stakeholders' first-person experience with interpersonal reflections and dialogue	Both qualitative and quantitative. Primarily impersonal and objective, also allows interpretive data	Both quantitative and qualitative data. Impersonal and objective data only
Learning process	Learning and dissemination integrated into the research process; questions about the status quo made possible; nested systems made visible. Iterative	Inquiry modes to define stakeholder problem and then match problem to existing intervention models or new combinations thereof. Linear	Knowledge development with researchers distant from the phenomena. Dissemination efforts passive and after the fact
Strengths	Complex contexts where what to do "best" is a subject of discussion and negotiation; systems activity is coordinated inside political, pragmatic realities. Seeks to localize unique practices	Expert diagnosis, aiming at contractual arrangement with defined scope of work. Seeks to deploy "best practices"	Understands simple and complicated contexts by weighting variables or forces into deterministic sets, seeks generalizability
Weaknesses	Many positive outcomes cannot be easily summarized quantitatively by those not familiar with action research can appear lacking in concern for objectivity	Efficiency orientation may conceive of new situations as versions of known prior ones, ignoring new knowledge creation opportunities. Delivering on a pre-determined contract can block emergent processes	Commitment to objectivity standards of the natural sciences render it as armchair speculation, that is, inactionable and potentially misleading
Benefits	The work belongs to those involved. Builds problem-solving and learning competencies in groups, organizations, communities	Returns value to those who pay	Serves an academic community. May exploit the object of research
Action outcomes	Action is coordinated as a seamless part of the research design. Learning platforms, workshops, experiments, new practices, new learning, new forms of knowledge/practice, sometimes also using peer review	Quick wins (may be short term only wins); may create stakeholder dependence, usually requires handover for follow-up for sustainable action which may be difficult to coordinate	Publication or communication of new information to disciplinary colleagues through peer-reviewed journals

Some authors, such as Coughlan (2002, p. 225), linked action research with strategic management

"Action research is fundamentally about change. It applies to the understanding, planning, and implementation of change in business firms and other organizations. As action research is fundamentally about change, knowledge of, and skill in the dynamics of organizational change are necessary. Such knowledge informs how large systems [such as the SEHA system] recognize

the need for change, articulate a desired outcome from the change and action plans. It implements how to achieve the desired future" Coughlan (2002, p. 225).

Figure 4. Steps of the action research cycle. (Lewin, 1946)



3.2.2. Practical Action research Steps

White (1999) defined three styles of research: explanatory, interpretive, and critical. Each of these styles is affected by the corresponding philosophical position and meaning. "*Explanatory research is heavily influenced by the positivist tradition in the philosophy of science.*" Interpretive research is primarily concerned with determining meaning within a social phenomenon; however, critical research is concerned with affecting social, or individual change. White's research style profoundly relied on Habermas' (1987) work, which referred to types of human interest that are knowledge-based. That is, how knowledge learned is relayed on to the field of human action. If the area of human activity is technical, then empirical and hypothetical-deductive styles of inquiry are appropriate. If it is practical (i.e., social knowledge), then interpretive or hermeneutic approaches are necessary. If it is emancipatory, critical methods are suitable (Newton et al., 2008).

Berg (2001) proposed three styles of action research: (1) technical-scientific, (2) practical – mutual, and (3) emancipating – critical. Each type has a particular aim. The technical style is "*to test a particular intervention based on a pre-specified theoretical framework*"; the practical style "*seeks to improve practice-and-service delivery*" and the emancipating style "*assists practitioners in lifting their veil of clouded understandings, and help them to better understand fundamental problems by raising their collective consciousness*" (Berg 2001, p. 186, p. 187) (Newton et al., 2008). (The practical style is closest to this study aim);

Within all the definitions, there are different types of action research. This study will adopt the practical – mutual collaborative – deliberative action research type, which aims to improve practice and service delivery through the implementation of the clinical audit strategy framework. The researcher sets out to analyze a specific task to identify what and how to implement key aims and objectives of the study (Lewin, 1946) (Collier, 1945).

There are four key steps: plan, act, observe and reflect. In this research, the researcher should start with an initial reflection step (Lewin, 1946).

1. Initial reflection: The need for action research arises from an area for improvement or a problem in an organization. In most cases, initial review and reflection – with research participants –, are required to direct the attention to the area for improvement. The initial step for developing a clinical audit strategy in SEHA is to review and reflect on the current clinical audit practice in SEHA and its HCF's; the participants will play a key role in obtaining this information during the data collection phase via interviews. This concept translated into an action research project. Typically, familiarity with current practices and the need for their change is essential for improving SEHA quality of care.

2. Planning stage: The essential part of this stage is creating a detailed plan of action required to develop the clinical audit strategy. Early planning for monitoring and future review of the

established clinical audit strategy can also be addressed at this stage, which will help sustain the change. In addition to the earlier interview involvement, the participants contribute to the final product of the research using internet calls interviews, clinical audits, or quality staff, leading to the improvement in all SEHA facilities (Bereiter, 1993) (McNiff, 2010). Setting type/s of data collection, such as interviews, is/are intended to be used in this project. At this stage, it is needed to select the participants from SEHA BE's and define topics and questions to support a clinical audit strategy development.

3. Action stage: Researchers and participants need to stay focused to minimize any deviation from the plan. Changes to the program might be required at this stage – considering the researcher's experience and the feedback received from participants.

4. The observation stage: At this stage, the researcher and the participants need to draw a detailed observation and monitoring plan that facilitates measuring the effectiveness of actions to keep focusing on developing the clinical audit strategy in SEHA. Researchers and participants should also keep records of any additional observations or insights that they might encounter while conducting this research.

5. Reflection stage: The researcher and the participants should work collaboratively to practice reflection on their current practice on a regular basis by arranging proper communications channels, such as meetings, when necessary. For this research, it is anticipated that more than one session will be required. Critical reflection is essential at the end of each action research cycle, to review what has been developed from the clinical audit strategy and set aims for the second cycle if targets are not met (Lewin, 1946) (Hart et al., 1995, 1996).

In this type of research, data, tools, or processes collected from the interviews are obtained from authentic sources such as the hospital facilities. The data needs to be checked for reliability and

validation through reliance on verified documentation. It is the researcher's responsibility to ensure that data is valid and can be used in the research.

3.2.3. Benefits of Action Research: Action research can be managed by an individual or a group. It helps the researcher and participants to focus on issues, problems, or areas for improvement, such as the clinical audit strategy for SEHA. It creates a collaborative environment between the researcher and the participants, to obtain intended outcomes, and reflect on their practice and improve communication to facilitate the sustainability of the implemented actions (Parkin, 2013) (Hilary, 2015).

3.3.1. Roles and Responsibilities: In preparation for conducting this project, it was essential for the researcher to establish specific parameters/boundaries for himself and the participants (clinical audit or quality staff managing clinical audit activity, from all SEHA facilities), and rule out any ethical or practical issues. Participants must have sufficient time to understand any research risks that they might come across, and their level of engagement in this study. It is the researcher's responsibility to clarify that through a written agreement or consent signed by the participants. Their involvement will be as noted above in the 3.2 action research steps. They will take part in the reflection process, planned interviews, and answering questions. They will also support the planning phase for the clinical audit strategy development and take and implement actions where needed (Campbell et al., 2010).

The participant's required level of engagement in the research affects the information gathered by the researcher. Research objectives, participant engagement, and transparency play vital roles in action research, where the researcher should pay attention to other methods of analysis (Campbell et al., 2010).

3.3.2. The role of the researcher: The action research methodology consists of coordinating different activities and ensuring contributions. The role of the researcher is that of a facilitator

of a research and learning process, especially if the nature of research is about provoking learning and the documentation of knowledge obtained from the participants. My role as the researcher is to administer questionnaires, facilitate the benchmarking process, and access research data.

For an insider using action research, there are certain benefits such as more straightforward ways to access data, having a better understanding of the healthcare system (SEHA) being an employee, reflecting on the knowledge and experience obtained to shape it to the best outcome, improving researcher work through the support of academic education, and being able to build judgment based on evidence-based research from the literature (Holian et al., 2013). In the case of identifying an area of poor practice, it is the researcher's decision where to highlight it. This will give the researcher a chance to improve his technique and allow the opportunity for more self-reflection while conducting the research. However, it is also important to note that when the researcher is an insider, the relationship between the researcher and the participants may negatively impact the outcome. The researcher may try to influence the shape of reflection and the involvement of participants, to serve specific outcomes (Parkin, 2013).

3.4.1. Questionnaire development: Being in a multicultural environment (SEHA employs staff from multicultural backgrounds (UK, Europe, USA, Middle-East, Asia, and Africa). Following consideration of cultural differences, the initial design of the questions will be tasked with understanding the participants' level of knowledge, their understanding and engagement with quality improvement, their facilities clinical audit culture if it exists. All this information should facilitate development of the clinical audit strategy, as the clinical audit process for improvement obtained from a different environment (UK) could be supportive for the development of the new. The SEHA current clinical audit activity varies between different HCF's, and starting with such questions can help to lead the researcher and participants in defining what is needed for the success of the implementation of the strategy. In addition, such questions can also help the

researcher understand participants background and knowledge to quality improvement, their commitment, and their needs. Below are the questions.

- Define quality improvement in healthcare?
- What quality improvement tool do you use?
- Can you define the clinical audit cycle for improvement?
- What is required to implement a clinical audit at your facility and in SEHA?
- Have you received clinical audit training?
- Have you been involved in a clinical audit project? If yes, what was it? What was your level of involvement? Also, what was the outcome?
- Does your organization have a clinical audit guideline or policy?
- How do you see the clinical audit uptake in your organization?
- What do you think is required to build a SEHA clinical audit strategy?
- Do we need to have a standardized clinical audit policy for all SEHA facilities?
- Can you share examples of practice improvement related to the implementation of a clinical audit or other tools?

All questions will be handed to the participants prior to the interview to help them prepare for the interview and benefit the researcher in conducting a successful discussion with prepared participants.

3.4.2. Interviews: This study adopts semi-structured internet calls interviews, in the shape of trigger questions with open answers, not closed questions. Semi-structured internet calls interviews using MS Teams, are defined as research instruments that are very strict in their procedure, offer less time and information to the researcher and are mainly based on the participants' comments. They are, therefore, also called the standard interviews and are significantly quantitative. As in this case, the questions for the interview are pre-decided according to the required point of data. Semi-structured interviews give a significant amount of

leeway to the researcher to investigate the respondents, together with maintaining a standard interview system. Even if it is a guided conversation between investigators and interviewees – considerable flexibility is provided to the researcher (Bruce, 2001).

Eight internet calls interviews were conducted, with all the participants being from the quality departments within SEHA facilities that are somehow involved in clinical audit projects; and if not, then a quota of staff that lead quality improvement projects. The interview questions are developed by listing the topics related to the research questions and reviewing previous literature. These questions will first be piloted within the research team to identify if they will be able to get relevant answers to the research questions required to achieve the intended outcome.

3.5.1. Research: It was anticipated that some challenges would be encountered during this research. Such complications might include accessing the current clinical audit practice in SEHA and the possibility of directing the study. Equally, the different types of quality improvement tools currently used in SEHA might affect routines in the clinical audit strategy.

As an insider researcher, this could have benefits, such as access to data, teams of clinical audit professionals inside the organization, the ability to understand qualitative data obtained and work closely with SEHA leadership to gain their support and facilitate the implementation of the clinical audit strategy (Morton and Palmer, 2000). Besides, the researcher might encounter activities, and changes within the organization, changes that might affect his/her work, research, or harm the organization where this research is being undertaken. It is the responsibility of the researcher to highlight this and try to address it (Morton et al., 2000).

3.5.2. Population and Samples: The approach of the clinical audit process is that it seeks to create a comparison between the agreed standards and current practices related to the patient care process. The ideal impression of the clinical audit is that it should be inclusive of all patients. Still, the approach is time-consuming and, at times, impractical due to limited resources – such

as budget restrictions and distant locations of SEHA HCFs, making travel much more difficult. This, in turn, highlights the need to select a specific method that will be representative of the overall facilities and ensure that the data collection process is more manageable through face-to-face (F2F) interviews. The study settles for a sample of one staff member (clinical auditor or quality staff) from each HCF, coming to seven participants in total. The participants were selected based on their exposure to clinical audits or quality improvement projects at their facilities.

3.5.3. Study Design: Research in a state-wide network such as the UAE seeks to embrace approaches that create comprehensive solutions and facilitate more significant changes in the healthcare system. The study aims to adopt a clinical audit process that is strategic in a way that helps avoid causes of patient mortality through enforced care routines. The study encompasses the use of semi-structured secure internet calls interviews that will collect data that can then be used as a point of reference during the development of the preferred guidelines. The study will be supplemented by using participants' notes that will significantly aid in the collection of additional potential study data obtained from the interviews, using the action research approach.

The clinical audit process is not a research approach. Unlike research interventions that require many people, the study only needs 8 participants, one from each SEHA HCF, to engage in the internet calls interview approach, however the researcher settled with 7 participants, due to the emerging issues highlighted in the limitation section (6.6). The most crucial attribute is examining the level of facility compliance with stipulated practice standards (Alson et al., 2006). Determining the exact population size that will be used for the study then becomes important even in terms of the area of study. The population size determines the extent of information collection and how crucial information is obtained from the participants.

The study sought to adopt a sampling approach that tends to be more representative of the area that SEHA covers, with an underlying assumption that the population of the study does not experience changes during the study duration (Adiloglu et al., 2011). The simple sampling approach allows easy selection of participants from the staff, the staff that has been involved in clinical audit projects, having a role of clinical auditors, or as a part of the team selected by their facility quality head to lead on clinical audit activity while ensuring that each participant has an equal chance of inclusion.

3.5.4. Data analysis: During this research, the data will be looked at through an online electronic system/application that will transcript all interviews. The interviews will be converted into text through an online system called 'level up lunch (<https://www.leveluplunch.com/>).' There are other types of similar applications that can also be used, such a transcribe-really or speech-to-text-demo, to name a few. However, the researcher decided on 'level up lunch' application as he is familiar with it. Then the researcher will study the data to examine the common themes identified between the interviewees, which will help in defining what is required for the development of the clinical audit strategy in SEHA.

3.6.1. Ethical implications: During this research, the ethical, moral, and legal issues relevant to the project have been identified and addressed by the researcher. These include matters related to the nature of the research – the development and implementation of clinical audit strategy – and how it will affect the staff and practices within SEHA. The research method used (action research), how participants contributed to the research, and data storage and analysis, all have been examined from an ethical perspective. Research needs to be conducted within the law and must not pose any physical or psychological risk to participants (Alison, 2000).

Different cultural backgrounds of the staff within SEHA might have an impact on staff practice and the research process and thus is a crucial area to be addressed. SEHA employs staff from

multicultural backgrounds (UK, Europe, USA, Middle-east, Asia, and Africa), thus this research was conducted with careful consideration to the cultural diversity of SEHA and its staff, to ensure this research success. The consent form has been designed, circulated, and signed by all participants, and they will have the right to withdraw it at any stage of the research. They should not have any disadvantages in their personal or work life. All data obtained from participants has been managed with high confidentiality and stored in a secure format, such as encrypted USB and laptop, and Middlesex university online drive (Susan et al., 2000).

If the research process or exploration raises challenging points that might affect participants or practice, it is the researcher's responsibility to make sure it is resolved and does not expand to cause any harm.

Issues were raised by clinical staff conducting clinical audits, which highlights an interaction between clinical review and ethics. These include concerns around confidentiality or the use of patient records, exploring sensitive issues, and the involvement of the ethics committee in clinical audits. The researcher has addressed such areas as they were encountered during this research. The researcher must remain well-informed of any development or changes within the research environment for him/her, in case some obstacle occurs (Susan et al., 2000).

3.6.2. Research ethics: The study procedure ensures that participants are free and voluntarily involved, consent is signed, and all information is disclosed to the participants. Also, the participants must know that they free to exit at any time. Data obtained is be anonymized and saved in a secure location (Carol, 2010) (Dennis et al., 2010).

In addition, ethical research approval was obtained from Middlesex University in July 2020 (appendix A) and the researcher's current employer SEHA in November 2019 (appendix B).

3.7. Limitations of data collection methods: The use of internet calls interviews have become increasingly popular compared to F2F interviews (Pettigrew, 2013), owing to certain benefits such as time and cost-saving.

The literature highlights similarities in the methods of data collection, such as the types of questions asked and the time provided for each question. Yet, there are reasons to assume that differences exist between internet phone calls and F2F interviews. Such differences can cause significant concerns that the researcher must address while conducting internet calls interviews because they may affect the responses received from the participants (Groves and Kahn, 1979). Groves and Kahn (1979) compared the F2F interview survey conducted on a national sample of 74 counties with a telephone survey in the same sample areas. The most important differences are the purpose of the use of the internet calls interviews. This reflects the possibility that participants may respond differently over the internet calls than they would if they were questioned F2F. In this research, it was the only feasible option – considering the circumstances surrounding the COVID-19 pandemic. However, the researcher made sure that all the participants had enough time to answer the questions adequately and freely (Emily et al., 2012).

3.8. Summary: This chapter detailed the characteristics of the population to be studied and the data collection methods to be used. The difficulties of using the selected data collection methods were exposed, and ethical issues were identified. Limitations associated with the use of internet calls interviews instead of F2F interviews and the effect of specific situations such as COVID-19 on the decision were studied.

Chapter 4: Project Activity

This chapter plans to detail the steps involved in collecting the data from the participants, the method and online application used to transcribe the data, and how the researcher analyzed the data to identify findings and themes. It includes the difficulties posed by the ongoing pandemic of COVID-19.

4.1 Pilot: While practising as an interviewer, interviews are more a means of self-introspection while implementing an explorative methodology informed by a theoretical framework, such as the Q process (DePoy et al., 2019). The pilot helped the researcher in defining issues related to the data collection process and questions used, to understand if changes are needed or not, to any step of the data collection, and to test the interview system (Microsoft Teams) and recording process used. So, one pilot interview was conducted, and no modification to any of the steps or questions of the study was identified. However, the pilot helped the researcher to be prepared for conducting the interviews and make certain adjustments such as being in a quiet room with strong internet connection, to conduct sound checks before every interview to make sure the interview would not have any interruptions, and to structure the questions to make them follow a clear sequence.

4.1.2 Interviews: This engagement involved a group of seven healthcare professionals. The internet calls discussion involved all seven participants on seven occasions. Participants were selected based on their current role in their healthcare facility, their relationship to clinical audit or quality improvement activity, and their willingness to participate in the study. As an investigator, Each time I was asked probing questions, I try to reflect on my previous experience and knowledge.

4.1.3 Project design: Currently, in SEHA, only a few healthcare facilities conduct clinical audits without clear guidance, strategy, or plan. This highlights the need to have a standardized clinical

audit strategy across SEHA to ensure that all SEHA HCFs have clear guidance on how to conduct a clinical audit and to fulfil the regulatory requirements of the DoH. This research conducted an assessment – through the planned interviews – of current practice and quality, staff level of knowledge, and understanding of clinical audit as a process for improvement. The researcher has conducted internet calls interviews with quality leading staff for development and clinical audit lead in all SEHA facilities, one staff member per facility as possible. Once data is obtained, the clinical audit strategy can be devised with a clear focus to facilitate its implementation later, with the support of senior leadership at SEHA corporate. Action research is based on different assumptions that indicate relationships between stakeholders affected by the study, such as the SEHA quality team at the corporate office and Healthcare Facilities, where the clinical audit strategy can be implemented.

The project design also included an assessment of the current work, achieved through a review of all available resources in SEHA, and an interview with quality leads (clinical audit leads if possible) within SEHA facilities. Current study designs on clinical audits can be benchmarked in SEHA healthcare facilities. SEHA healthcare facilities offer interventions that are, in a way, thriving as a process when implemented.

During the project, the previous literature was explored, and the development of a Clinical Audit Strategy involved conducting a review of current practices and understanding the present Clinical Audit culture in SEHA corporate office and its healthcare facilities. A transparent process and timeline of all stages of the research is highlighted in the process map and Gantt-chart below (Figures 5 and 6).

Figure 5. The process map for the development of SEHA Clinical Audit strategy in a PDSA approach (Created by the researcher, adopted from the IHI model PDSA and HQIP clinical audit strategy guide)

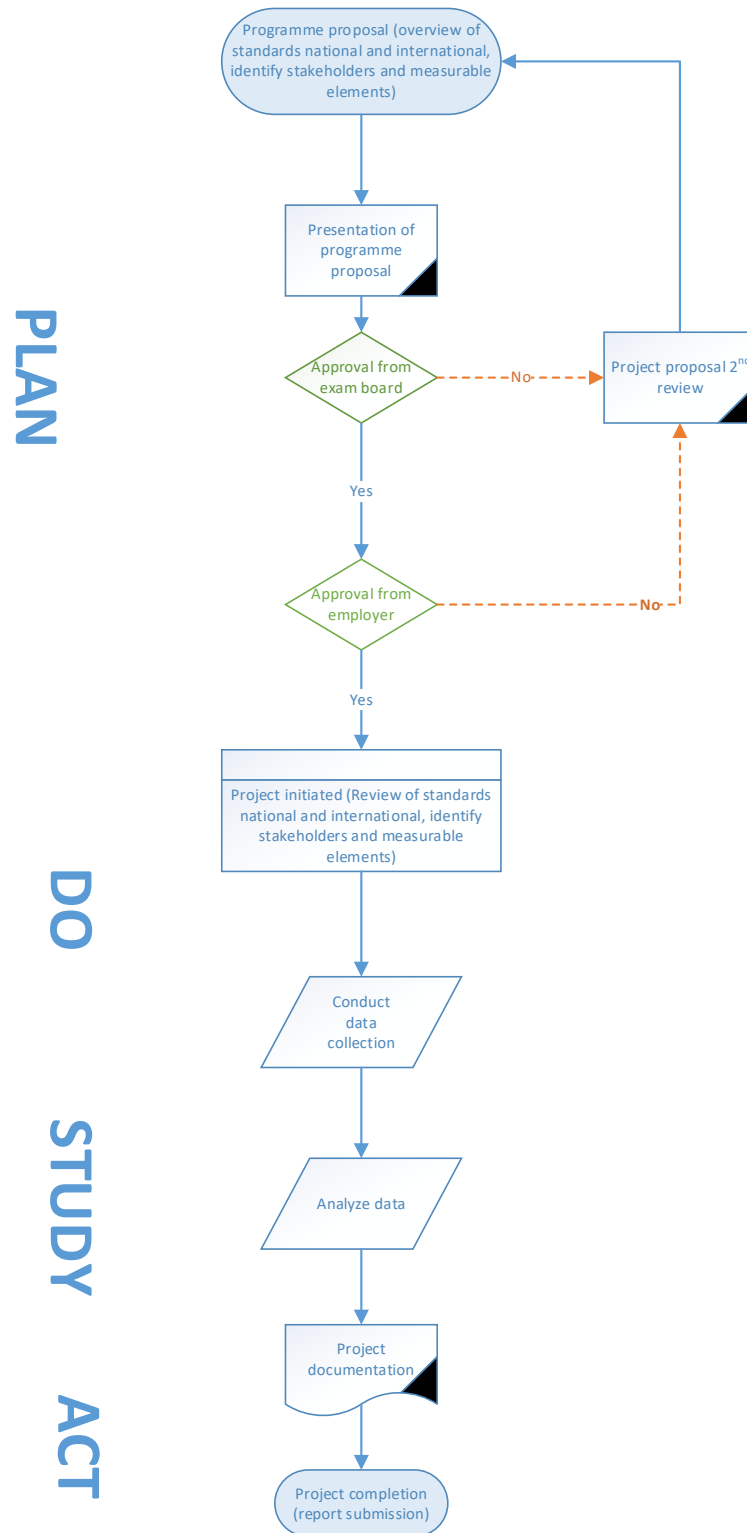
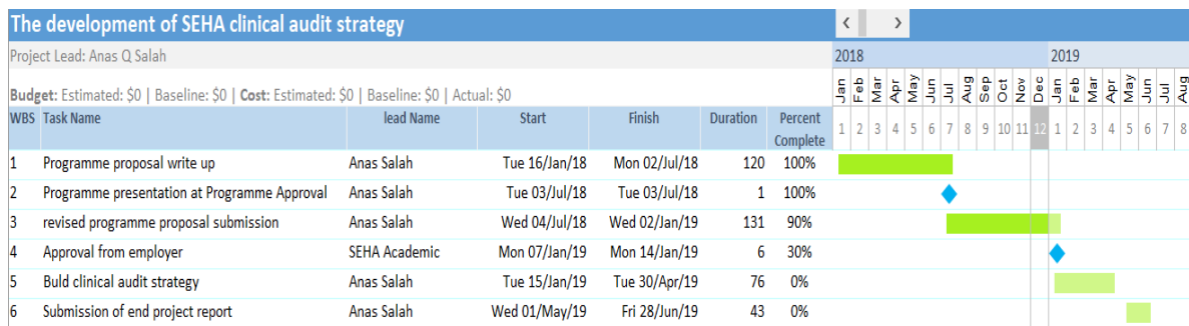


Figure 6. The timeline (Gantt-chart) for the development of the SEHA Clinical Audit strategy (Created by the researcher, adopted from the HQIP clinical audit strategy guide)



4.1.4.1 Phone interviews (internet call through Microsoft (MS) Teams): Throughout my interviews, I discovered shared experiences. I observed that telephone interviews are quite convenient and useful. As a former provider and Muse business manager Angela Carver (2016) points out, *"If there exist a bunch of prospects and you're simply attempting to narrow down whom to get in for an in-person interview, sometimes the telephone interview may be beneficial"* (Holloway et al., 2016, p. 127). Interview questions provide a comprehensive and thorough understanding of the perspectives of individuals.

However, qualitative inquiry can be challenging for the researcher's lack of experience to conduct the interview effectively. Interview pilot testing is an important aspect and useful in performing qualitative research as it illustrates the main study's improvisation. In-depth semi-structured interviews were explored. The pilot study was used to prepare these questions for the interview process and the investigator as the interviewer. The pilot phase helped improve the verbal presentation and the overall interview plan. Furthermore, the pilot helped the researcher to be prepared for the interviews, take an organised sequence while asking the questions, and ensure that the laptop sounds clear to listen to participants answers, allowing participants to talk, give them time and space to talk.

The pilot interview generated information to address the interview procedure during the research questions interview. The information from this interview was analysed and reviewed, which included the process for asking the Semi-structured questions and to consider what is required to be prepared from having a good internet connection to a clear sound device (speaker). The Pilot study and all interviews were conducted in English.

4.1.4.2 Interview adjustments A fundamental change in the research methodology was related to the COVID-19 emerging worldwide and in the UAE. In the wake of COVID-19, SEHA moved its focus to managing the disease. This has directly affected the research because after the pandemic was declared, the researcher was required to modify the data collection methodology from face-to-face interviews to interviews through internet calls using MS Teams. This was not anticipated by the researcher initially that such adjustments would be needed.

4.1.5. Merits: Using internet calls (through MS teams) to perform in-depth interviews is a quicker, easier way to data collection. According to DePoy (2019), internet calls are often the preferred method of interviewing because it takes less time to plan and execute them than a face-

to-face interview. Nevertheless, just like a face-to-face interview, with the internet calls interview, the interviewer gains a deeper understanding of responses by treating the questionnaire like a powerful speech and being able to validate each answer. As opposed to the study methods that employ the internet – through mailings – or focus groups; internet calls interviewing allows the interviewer and the interviewee to ask questions and discuss issues, just like a face-to-face (F2F) interview, but without the need for travel that would involve considerable expense and time commitment. Internet calls interviewing is ideal if the target respondents are residing within a substantial geographical range – such as in SEHA HCFs areas – or if many participants are needed to accomplish the project aims. These days, in particular, due to the COVID-19 pandemic, it has become challenging to travel and conduct F2F interviews. Aspects like the safety of the researcher and the participants and maintaining social distance were also considered. Thus, the ideal option was to go with internet calls interviews, ensuring both researcher and participants are safe from any risk that might be encountered with F2F interviews (DePoy et al., 2019).

4.2. Questionnaires: Having produced the questions for the included participants, I piloted the acceptability of these inquiries among the participants. The pilot elaborated the process of an internet call through MS Teams, navigating and closing rates, and subsequently, evaluations were made to help improve these questions. The pilot also included an interview with a respondent; this initial interview was aimed to determine the face validity of the semi-structured interview questions. Secondly, the questions were sent through an email to the participants, along with a consent form and brief details about the study; this was also to ensure that all participants were familiarized with the questions and discussion points prior to the interview as all had asked the researcher what type of questions and discussion points would be a part of the interview. Then, after receiving the signed consent, the researcher sent an electronic meeting invite to each participant through the 'Microsoft Teams' application, where all interviews were conducted and

recorded. After that, all recordings were stored in a secure and locked location, and the only researcher has access to it.

4.2.1. Merits: Most studies and questionnaires provide a straightforward analysis of the outcomes. With built-in tools, it is simple to analyze the results without a background in statistics or scientific investigation. The information collected is relatively more direct. All this data gives the researcher the ability to create new strategies and understand trends in the study. The study data were transcribed (converted to text) using an online system called 'level up lunch (<https://www.leveluplunch.com/>).' There are also other types of applications that can be used, such a 'transcribe-wreally' or 'speech-to-text-demo,' but the researcher decided on 'level up lunch' application because he is familiar with it. Analyzing responses helps in the making of predictions and creation of benchmarks for follow-up inquiries or questionnaires.

After transcribing all the interviews, the researcher reviewed all participants' comments to identify any similarities between the participants. It was clear that some comments were repeated between the participants, which highlights their importance for the development of a strategy. All participants' comments were reviewed, and key similarities served as the themes for the research.

4.3. Research challenges: The lack of visual cues via internet calls is believed to have resulted in the loss of contextual and communicative information and the opportunity to probe and seek an explanation for the answers. However, internet calls may allow respondents to feel relaxed and capable of divulging sensitive information, and the data is lacking regarding them generating lesser quality information. Research is required comparing these modalities and analyzing their effect on information quality and their usage for examining changing subjects and populations. In addition, ever since the COVID-19 pandemic emerged, most – if not all – the quality staff at SEHA – including the researcher – were busy with activities to support frontline staff in their

fight against the pandemic, which resulted in difficulty finding the appropriate time to conduct the interviews with participants since they were already engaged.

4.4. Summary This chapter describes the study activity, from the design process to the type of data collected and how it was obtained from the participants, which involved defining the roles and responsibilities of the researcher and the participants. It also discussed why the researcher decided to use internet calls interviews, how the internet calls interviews were conducted and then transcribed using an online application system, and subsequently analyzed by the researcher, to define common themes that will help in defining what the requirements for the development of the clinical audit strategy in SEHA are. In addition, this chapter highlighted the common challenges that this study might or will face while conducting action research through semi-structured interviews by internet calls.

Chapter 5: Findings

The findings from the participants are discussed under the respective research questions. As acknowledged, this research adopts interviews as one of the most useful qualitative approaches in data collection. Calls are set up with health care workers on duty in their workplaces. Based on the nature of the research, narrative analysis methodology is selected as the most useful qualitative research data analysis procedure (Ayers, Fields et al., 2019). According to Ayers, Fields (2019), a narrative analysis approach is a valuable tool designed to investigate the hidden ideologies inherent in personal experiences and the broader community that defines organizational behaviour. In this case, the interpretative model considers how contacted care providers interpret their daily experiences.

This chapter highlights the key themes, such as having a standardized SEHA clinical audit policy leadership involvement as a critical stakeholder and other emerging themes from participants' interviews, that should drive this study and inform the necessary change for the implementation of the clinical audit strategy in SEHA and its HCFs.

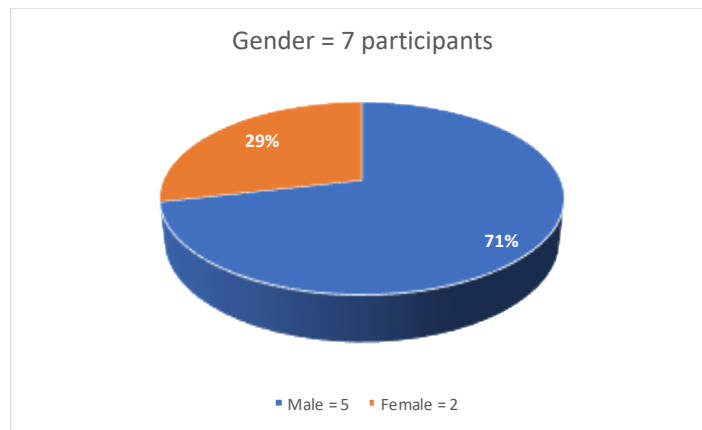
5.1. Results: The questions were designed to assess the participants' understanding and knowledge of the clinical audit process. The intention was to understand the clinical audit process and its implementation at the Healthcare Facilities (HCFs) and derive interventions for improving the clinical audit processes. The subsequent sections summarise the responses from the contacted participants based on the scope of the developed question.

5.1.2 research Participants

In total, there were eight healthcare facilities (HCF's) in SEHA. It was important to have the view and comments from all HCF's, hence the researcher intended to recruit all 8 participants. These were staff from HCF's quality department that were managing clinical audit or quality improvement projects within their facility, despite their level of experience and knowledge in clinical audit, as in some HCF's there is only one staff member managing this activity. Furthermore, some HCF's had no records of clinical audit activity at their HCF's, as highlighted in previous sections of chapter 2 and 3. However, due to the emerging issues highlighted in the limitation section (6.6), the researcher finally settled for seven interviews to be conducted. Selecting such participants – who are involved in clinical audit or quality improvement projects – should help the research in understanding the need for the development of SEHA clinical audit strategy through the action research technique.

The table and chart below provide participants background (location by UAE regions and gender):

	Job title	Location
1	Quality Officer 1	Abu Dhabi Region
2	Clinical Auditor 1	Abu Dhabi Region
3	Quality Officer 3	Abu Dhabi Region
v4	Quality Officer 2	Al Dhafra Region
5	Clinical Auditor 2	Al Dhafra Region
6	Clinical Auditor 3	Al Ain Region
7	Clinical Auditor 4	Al Ain Region



5.2. Questionnaire responses (themes)

Theme 1. Definition of quality improvement

There was consensus that quality improvement defines a process in which the health care providers can advance the nature of health care administered to patients to improve the levels of care, satisfaction, and safety. The participants acknowledged the importance of a quality improvement review process and this was emphasised in their answers through the post interview reflective observational notes of the researcher. All participant engagement and elaboration on the quality definition indicate knowledge and the experience of the participants. The consensus was that:

"Quality improvement helps advance the knowledge base of the care providers and facilitates the processes of reflection in building an evidence-based practice."

From participants Quality Officer (QO) 1, Clinical Auditor (CA) 1, CA2, and CA3.

Theme 2. Commonly used quality improvement tools

Based on the interview responses, some of the most common quality improvement tools include the Plan-Do-Study-Act (PDSA), Root Cause Analysis (RCA), Failure Modes, and Effects Analysis (FMEA).

Participant QO1 responds that.

"I know many quality improvement tools such as the PDSA, RCS, and FMEA."

It was also clear from this participant had experience in participating in quality improvement projects.

According to participant 1, the American Nurses Association has procedures set to avoid hand contamination as a QI intervention. According to participants QO1 and QO2

"Measurement is an integral part of the process of enhancing efficiency."

A clinical audit also emerged as an essential quality improvement tool in Healthcare settings. Most participants acknowledge that the audits facilitate the reflection of procedures used and their outcome against the intended standard. For instance, participant CA1 noted that:

"Auditing the healthcare providers' compliance with hand hygiene offers a benchmark for change."

Observational audit findings will help determine the most effective approaches for education and training according to participants CA1, CA2, and QO3.

"Observational audits such as hand hygiene can help define staff needs for education and training; then results can be shared with frontline health care providers, boards of directors, and hospitals staff." From post interview reflection observation notes by the researcher, providing such examples highlights the level of understanding of the participants' questions and knowledge.

All participants acknowledge the importance of most of these tools, including the PDSA, the RCS, and the FMEA, in building quality assessment, re-evaluation, improvements, and assessment.

"quality improvement tools such as PDSA, the RCS, and the FMEA can help improve care once used in assessments and audits."

From all participants (QO1, CA1, CA2, CA3, CA4, QO2, and QO3).

The standard definition of clinical auditing is understood as the reporting procedure used by auditors to analyze the patient records and related documents of care. A clinical audit involves the measures that a clinical auditor takes to ensure that specific information about the care is accurate. From the discussion with participants, there is evidence that numerous reasons exist to justify such measures.

"clinical audits that help advance health care."

from participant CA1, CA3, and CA4

Theme 3. Requirements for the implementation of a clinical audit in SEHA

Some of the requirements for implementing the clinical audit involve a larger-scale awareness campaign among the different disciplines of inpatient and outpatient care. Participants CA3, CA4, and QO2 noted that:

"It is important to have a unified defined definition for clinical audit in SEHA,"

This was in acknowledgement of the need for proper sensitization in the hospitals on the importance of standardization of the current clinical audit practice in SEHA. Other participants CA1 and CA2 noted that:

"Such practices can be established through the thorough implementation of clinical audit policy education, accompanied by sufficient training support on the specific tools used to realize the clinical audit process." In addition, from the reflective observation of the researcher, it was highlighted why it is important to have a clinical audit policy and training to help healthcare professionals understand the meaning of clinical audit and who it can be used for.

Participants CA4, QO2, and QO3 agreed and noted,

"that the performance also requires avenues that can be used to monitor the outcomes."

As noted, all participants (QO1, CA1, CA2, CA3, CA4, QO2, and QO3) acknowledge that:

"effective implementation of the clinical audit policy and strategy will require the formulation of a task force that can facilitate the day-to-day management of such interventions."

Implementing the clinical audit strategy requires that some of these insights are considered for improving the eventual outcomes and efficiency of the employed interventions in improving the quality of life of the patients.

Theme 4. Clinical audit training

According to participants QO1, CA1, and CA4

"Clinical audit training involves conferences, seminars, and postmaster training sessions."

That emphasizes understanding what clinical audit is and improving quality auditing in care. One of the participants, QO2, recalls the:

"2018 and 2019 clinical audit training sessions, which presented clinical audit programs that had insights into quality auditing in healthcare in SEHA".

It became clearer through the researcher's reflective observation that; the significance of such a recollection is evidence of efforts to advance the clinical audit procedure knowledge-base among the care providers.

The participants CA1, CA2, and QO2 acknowledged that

"There was a minimal emphasis on clinical auditing training in their facilities."

While QO1, CA3, and CA4 said

"We did not have any clinical audit training at our facilities,"

Participant QO3 noted that

"I was not clear if our facility had any training."

Theme 5. Involvement in a clinical audit project and what is the level and outcome of the involvement

Participants QO1, CA1, and CA4 noted that

"there were clinical audit projects, as part of the standard routine procedures that required assessing the processes in the healthcare facility I work in."

The clinical audit projects involved evaluating their successes and failures and recording the effects on the levels of patient satisfaction and clinical outcomes. The project was required to identify profile guidelines that were available in the facility and assess their effectiveness from the participants' experiences. The projects also required making guidelines on the proper diagnosis of people while evaluating the effectiveness of the current procedures in the facility.

Participants QO2 noted that:

"The care providers were supposed to give guidelines on the impact of the proposed new diagnosis guidelines and offer support in evaluating care."

Theme 6. Clinical audit guideline or policy at SEHA and its Healthcare Facilities (HCFs)

Five of the participants QO1, CA3, CA4, QO2, QO3 had no clinical audit guidelines policy, as they mentioned

"We did not have a clinical audit policy or guideline at our facility." However from my reflective observation of participants answers, from the tone of their voices, it could be noted the importance of having clinical audit policy in place was considered important.

In some facilities, however, some participants were quick to note and acknowledge the presence of clinical guidelines or policy procedures that were not adequate against the required standards.

Two participants CA1 and CA2 stated that:

"We do have clinical audit policy at our facility, but it is out of date and not updated for years."

Working in the healthcare facilities, the professionals acknowledge the impact of the clinical audit guidelines in improving the quality of assessment and quality of care but the participants CA1 and CA2 also recognize the need for:

"Further evaluation of the effectiveness in multidisciplinary settings and the standardization of one SEHA clinical audit policy."

Six of the participants, QO1, CA1, CA2, CA3, CA4, and QO2, appreciated that clinical audit uptake in most healthcare facilities:

"As it was good considering the value of clinical audit in improving care."

This was commendable, considering the understanding of the impact of such procedures in improving the quality of healthcare administered and patient satisfaction *levels*. The Healthcare workers, however, acknowledge the challenges associated with extensive sensitization among the different care providers and the limited understanding of the use of the steps employed in the clinical audit process.

Theme 7. The requirement for building a SEHA clinical audit strategy

According to the participants QO1, CA1, QO2, and QO3

"Clinical audit strategy in SEHA requires strong leadership support." It was also noted through reflective observation that participants emphasised the importance of having leadership support; based on the diverse culture within SEHA, it was vital to have leadership support.

This would focus on the issues that have to be investigated, amended, and tested. The participants QO1, CA1, CA4, and QO3 also acknowledged that:

"There should be a vital communication link between different disciplines in the Healthcare facilities."

Such a link should influence the assessment of the experience of the entire health care plan for patients. Communication is:

"Preferable between the quality management team of all the departments."

According to participant QO2. The strategy and policy guidelines should be a

"consensus of all the stakeholders."

Participant QO3, was accompanied by a training program and HCFs annual clinical audit planner with a list of clinical audit projects.

Theme 8. The need for a standardized clinical audit policy for SEHA and its HCFs

All participants (QO1, CA1, CA2, CA3, CA4, QO2, and QO3) strongly believe that:

"SEHA healthcare systems have to have a standardized clinical audit policy."

Because that would allow the standardization of the practice,

"Especially performing the cycles of clinical audit," from participant QO1,

That would require standard practice across healthcare facilities and disciplines. It also became apparent that standardization would provide avenues for establishing the benchmark necessary to monitor shared concepts in institutions, as noted by participants. The need to have a

standardized clinical audit practice across SEHA was noticed through the participants' answers and examples.

"Standardization can help benchmark fairly between SEHA HCFs."

Participant QO2, for instance, noted that:

"Quality Improvement (QI) in Healthcare takes time to enhance and improve the quality and the safety of care that we deliver to a patient." And "Quality improvement needs to be structured,"

So, the use of tools and techniques is essential.

"The tools were used in combination with the focus PDSA (Plan-Do-Study-Act) and were implemented in a quality improvement project at our hospital."

From participants QO1, CA1, QO2, and QO3.

All the participants (QO1, CA1, CA2, CA3, CA4, QO2, and QO3) acknowledged the need for clinical audits in advancing the quality and safety in healthcare. Four participants, QO1, CA1, CA4, and QO3, appreciate the current efforts within SEHA to offer

"education support among the staff on clinical audit procedures."

And merit. Two of the participants CA1 and QO2, note concerns over

"the limited access to proper clinical audit tools."

Moreover, the lack of adequate emphasis on the urgency of implementing changes necessary to advance clinical audits within SEHA. All participants (QO1, CA1, CA2, CA3, CA4, QO2 and QO3), however, acknowledge the

"efforts towards increasing the reach of clinical audits and quality improvement tools, such as PDSA."

That are being advanced to implement clinical audit solutions. Five of the participants QO1, CA1, CA4, QO2, and QO3 noted that

"There are various indicators reflecting knowledge and understanding of the implementation of clinical audit strategy in SEHA."

However, all the participants (QO1, CA1, CA2, CA3, CA4, QO2, and QO3) expressed that

"healthcare professionals and senior managers' ability to conduct an effective clinical audit."

As a vital component of the successful implementation of clinical audit strategy.

5.3 Summary

Based on the participants' observations and the emerging themes from participants comments, it becomes more apparent that there is variation in practice between different SEHA HCFs; some had implemented a clinical audit policy combined with continued education while others did not implement clinical audit as a tool for improvement and relied only on other identified tools, such as PDSA, RCA, and FEMA. Also, from participants' comments, a standardized approach to clinical audit strategy implementation through a governing task force that will ensure successful implementation of the strategy is needed. Additionally, as noted by the participants and through post interview reflective observation notes, engaging several critical stakeholders in the process is essential. The leadership connection and its influence on the strategy implementation, frontline staff and their level of involvement, and the role of the clinical audit officers and quality personals at each HCFs cannot be overlooked. Lastly, the researcher felt and reflected through participants answers, the participant's knowledge and experience in conducting quality improvement projects, and the passion for the implementation of SEHA clinical audit strategy was evident.

Chapter 6: Discussion

All the participants acknowledged the importance of the clinical audit in healthcare as a procedure that significantly impacts on the quality of services delivered. The participants also recognized that it is necessary to implement every step of the plan of care to ensure effectiveness in advancing the quality of care and safety for patients. The discussion responses show the need for multidisciplinary cooperation in knowledge-based management, quality facilitation, and leadership in facilitating the adoption of technology in advancing evaluations and reducing errors in clinical audit processes in healthcare facilities.

6.1.1. Build a clinical audit policy for SEHA (theme 1, 3, and 6)

Building a clinical audit policy for SEHA requires basing its principles on the new guidance for clinical audits, published by the European Commission, as highlighted by participants QO1, CA1, and CA4. The commission presents guides on clinical accounting principles and standard models that demonstrate a sustainable national system of clinical audits (De Langen, 2016). According to De Langen (2016), existing guides offer useful guidance for internal audits/partial external audits. In the UAE, the Welfare Act of 1999 puts the duty to monitor and improve the level of healthcare on clinical auditors (Al Ketbi et al., 2018). All human Health Service employees must carry out audits, and in some cases, conduct random assessments to determine if there is an indication that the objective examination has been carried out. This was also highlighted as a reflective observation noted from participants QO1 and CA1.

SEHA, as an institution, recognizes that healthcare has an obligation to the people to improve methods for the level of care to thus improving patient safety and the efficiency of the organization (Ali et al., 2016). According to Al Ketbi et al. (2018), SEHA HCF was supposed to create clinical auditing of healthcare certification at Abu Dhabi based on the audit standards. This principle is understood as the connection between objective audits and the level of patient

care and safety. The UAE Department of Health (DoH) and SEHA recognize the importance of supporting audits in healthcare practice and nurses' roles associated with conducting audits at the selected hospitals in the Abu Dhabi, Al Ain, and Al Dhafra regions. Some studies have demonstrated the possible benefits of software audits to evaluate or measure the quality of recorded healthcare assessments and attention; this was also highlighted by the participants CA1 and CA2.

6.1.2. Build clinical audit training across SEHA and its facilities (theme 4, 5, and 7)

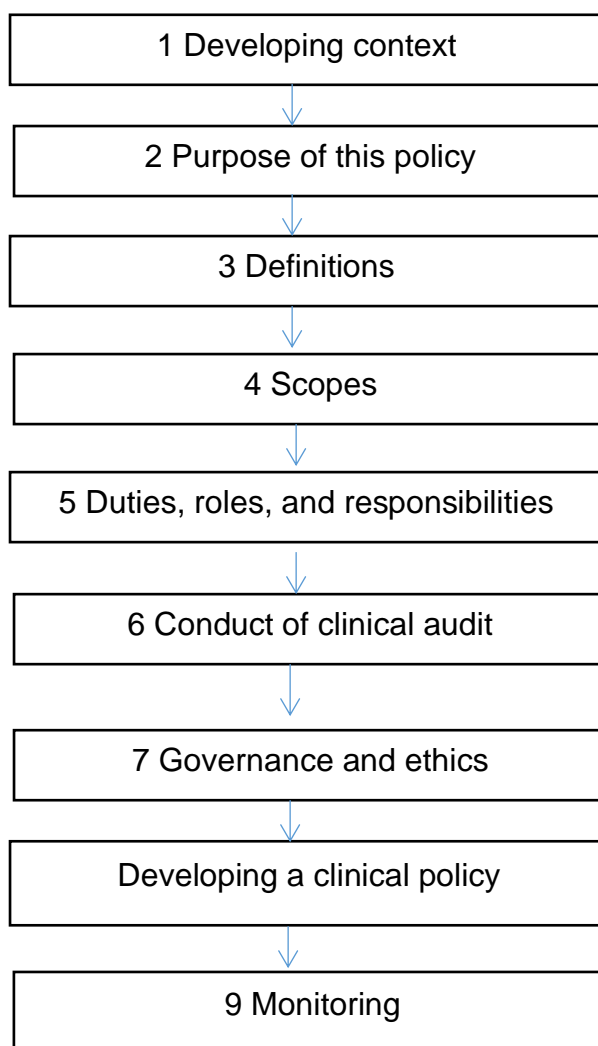
Medical and Healthcare Auditing comprises contrasting existing practices with evidence-based best practices in recommendations, defining areas for improving quality, and introducing implementation improvements to meet the standards (Taha et al., 2020). Several efforts could be derived from the participants QO1, CA3, and CA4's comments. For instance, the fourth and fifth respondents note that their facility has helped develop quality enhancement and training for special tools such as PDSA but not a clinical audit; the theme is around primary tools needed to deliver process improvements in hospitals. It would benefit SEHA and its HCFs to have a clinical audit training program for each year, with materials standardized across SEHA.

6.1.3. Clinical audit policy program (theme 1, 3, and 6)

Clinical audit training, as highlighted by participants QO1, CA1, and CA4, in any setup, has extensive interlinkage with the policies currently utilized in audits as well as the policy formulation processes. The participants reveal that for an effective policy program, all healthcare practitioners' responsibility is to ensure that the care of the highest quality is delivered for the patients/clients. All personnel should be trained and demonstrate practice of the highest quality (Al Jaber et al., 2016). Ideally, clinical and nursing audits should be interdisciplinary, but uni-disciplinary audits can also be carried out. Based on the CA2, it could be perceived that every department should have one annual audit scheme within the organization, based on audit

selection criteria. There are specific steps that are primarily recommended, as outlined in the flow chart below. The diagram illustrates the procedures for developing a clinical audit policy.

Figure 7: Developing a clinical audit policy procedure ("Developing a clinical audit policy," Healthcare Quality Improvement Partnership HQIP, 2020)



6.1.4. Set Criteria and standards (theme 1 and 3)

The idea of setting specific criteria for the standardization of clinical audits is derived from the fact that many aspects contribute to the performance of the organization's clinical audit. These include good contact, the dedication and empowerment of workers, and a sense of ownership.

They also require the existence of committed staff for extensive audit, which has been identified by participants CA1, CA3, and CA4.

These standards are based on the concept that clinical audits must provide a credible process of assessing the process, the training, or results against the pre-agreed set of measures as a part of the quality improvement process. The participants CA1, CA3, and CA4 appreciate that such procedures must be focused towards improving quality measures within the care and they play an essential role in keeping higher standards of care and patient safety. The objective auditing should be an integral part of the objective process – it should not be a one-off random activity and should be conducted regularly to observe improvements (or failures) in clinical practice. Clinical auditing is a fundamental structure of clinical governance and should be carried out by all care personnel.

Prades et al. (2016) recognize that auditing involves assessing knowledge using pre-determined standards. The participants acknowledge that clinical audits are often used to monitor and measure how well the clinical service or clinical environment complies with specified standards of good training. According to Prades et al. (2016), each facility must determine the basis on which the policies can be assessed before the clinical audit is started.

Chart 7 shows the steps necessary for developing an effective clinical audit policy. The aim of performing the clinical audit policy is to see how practical, real-life knowledge in the service or clinical environment equates with accepted best-practice or standards of care. Inadequacies in policy formulation and execution are risk factors for the failure of the policy to reach the expected results. The following sections are split into two main parts. As shown in chart 1, the steps first define policy performance assessment procedures, policy execution, and policy assessment as separate entities. The discussion of policy assessment as an integrated procedure in policy formulation and execution is then analyzed. These sections attempt to incorporate the principle

behind incorporating public-policy assessment into the preparation and implementation levels. After the clinical audit policy is completed, feedback with suggestions on improving knowledge is presented to all stakeholders, as highlighted by all participants (QO1, CA1, CA2, CA3, CA4, QO2, and QO3). This crucial step must not be forgotten. After the proposed changes or improvements have been applied, the clinical service or clinical environment should be re-audited. The process is related to the clinical audit cycle.

6.1.5. Observed practices (themes 1, 2, and 7)

Five of the participants, QO1, CA3, CA4, QO2, and QO3, agreed that audits should be of different types and levels, either reviewing specific components of the medical processes or evaluating the entire procedure. As the participants observed, audits should address several depths of the operation, from general characteristics to details. A complete objective of the clinical audit must consider the whole patient pathway from referral to follow-up. Patient records audits are essential for partial audits and should remain within a complete objective examination (Little et al., 2019). Taha et al. (2020) recognize that complete details of processes should be evaluated, and a reasonable agreement on better practise should be reached for use as the standards of judgment.

According to Taha et al. (2020), auditors should record the accounting scope, processes performed, transaction testing completed, and findings of this assessment. Any violations, policy or procedures exceptions, or additional deficiencies mentioned within the examination should be included in the accounting document and promptly reported to the board or the assigned committee. The commission or appointed committee and the accounting staff should follow up audit deficiencies and document disciplinary actions.

Clinical audit is recognized by all participants as an important way to verify that the care provided by the facility meets acceptable standards and is safe and efficient. Access to patient

records/physical data without permission for the use of the clinical audit is usually permitted. These clinical audits should be internal to the facility and not part of the multi-site/organization audits. They would usually be registered with the facility's clinical quality department/clinical audit function. Where these standards are not seen, and the right to patient data is requested, a proposal should be sought before sharing data or providing access to patient records.

The observed practise offers certainty concerning the supply of excellent and efficient patient care. This stage is committed to delivering an effective clinical audit for all the clinical services. The documents provide a framework to help professionals advance quality. Taha et al. (2020) recognize that clinical accounting primarily represents the systematic investigation or assessment of medical radiological processes. The procedures are aimed at improving the quality and the effect of patient care through integrated evaluation. Radiological practices, operations, and outcomes are analyzed against agreed standards for better medical radiological processes. The change of methods where indicated, and the use of new measures is suggested if required. The responsibility means responsibility involving various medical exposures attributed to the professional, significantly: consideration; improvement; objective assessment of the effect; cooperation with other specialists and the healthcare professionals, as appropriate, regarding practical aspects; gathering information, if applicable, of past tests; offering existing radiological data or records to different practitioners, as needed.

6.1.6. Performance comparisons (theme 1, 5, and 7)

Performance assessment and improvement monitoring of the quality of care offered to patients is of critical importance in the day-to-day clinical practice and at the health policy design and funding levels. According to Prades et al. (2016), as noted by all participants, several instruments have been developed, including incident analysis, health field assessment, and clinical auditing. The objective test consists of assessing the real effect of the procedure against well-defined

criteria based on the principles of evidence-based medicine to determine the changes required to improve the quality of care. For instance, patients suffering from chronic renal diseases present with numerous issues which could be made?? the subjects for clinical auditing tasks. Although the results of these surveys have been encouraging, proving the strength of accounting, overall, the current information is not clearly in favour of clinical examination.

Participants QO1, CA1, QO2, and QO3, acknowledge the importance of clinical managers, as a stakeholder, in monitoring policy implementation against set standards as per the performance expectation. Ideally, clinical managers oversee their departments by maintaining the procedures, guidelines, and policies that put the physicians under supervision. These essential jobs require an intimate knowledge of clinical responsibilities and actions, a clear understanding of monitoring processes such as setting Key Performance Indicators (KPIs) and conducting clinical audits. Clinical managers also perform standard administrative functions, including growing budgets and coordinating with the demands of different directors. Health knowledge managers maintain patient records – keeping them filed, up-to-date, and safe. Two participants QO2 and QO3 alluded to the fact that the government regulations dictate patient records creation and safety, and health information managers must stay up-to-date on such legislation, too, as per new data protection technologies and techniques.

6.1.7. Change implementation (themes 7 and 8)

Policy formulation and execution are two crucial stages of creating national policies. The implementation phase's conclusion depends on the specific preparation of terms, which indicates that these two stages are related, and their motivations are interconnected. As highlighted by participants CA1 and CA2 from SEHA HCFs with a developed clinical audit policy, this study suggests assessment as the critical linking stage involving incorporation in the preparation and implementation stages of creating system-wide policies. Assessing within the preparation and

implementation stages help prevent the replication of mistakes and issues impeding understanding of the intended results upon full implementation of the typical policy. As seen in Chart 1 above, the assessment within the preparation stage, coupled with its successive sub-phases, helps pave the way to the successful SEHA comprehensive clinical audit policy with its formation and implementation (Prades et al., 2016) (Haskins, 2019).

6.1.8. Build a clinical audit plan for SEHA (theme 6 and 7)

Clinical audit is a cyclical process that can be illustrated in four stages: Stage 1, audit preparation and planning, Stage 2, measuring the level of performance, Stage 3, improving, Stage 4, maintaining the improvements (Healthcare Quality Improvement Partnership, 2020). Themes also cover more potentials of structural change, and industry-based strategies may be more useful at presenting quality improvement in Healthcare (Haskins, 2019). There have been mentions of the success associated with the effective implementation of the QI processes.

For instance, Haskins (2019) appreciates that quality improvement policy and similar policies have helped identify the model for systems shift that is now generally referred to only as the total quality improvement policy in Abu Dhabi. The guidelines have a set of measures and instruments for setting goals and designing, implementing, and evaluating changes. Clinical audit intervention proposals are on-going processes of reviewing clinical measures against the agreed set of criteria to achieve the highest quality of care (Fitzmaurice et al., 2020).

Further, the general public's interest supports higher clarity and the probability that these healthcare facilities meet the demands of the local population. These requirements are in line with the recommended governance systems. The UAE DoH intends to publish healthcare facilities' performance and critical results so the public can see. An objective examination is the clinical governance element that provides the most significant possibility to determine the quality

of care routinely offered for healthcare users. According to Fitzmaurice et al. (2020), auditing should thus be at the very heart of clinical governance systems; all participants also noted this.

6.1.9. Governance systems in clinical audit policies (theme 4 and 7)

According to Palmer (2002), clinical governance is a mechanism in which institutions are responsible for continually enhancing the quality of service in their facilities and preserving high standards of care. It is the cornerstone structure outlining the minimum scheme of clinical governance. Affirming the need to establish proper clinical administration systems, the contacted care providers acknowledge that quality improvement and similar policies synchronized with effective governance systems have the potential to advance the new knowledge, current research, and changes in government interest in clinical auditing. Three of the participants recognize that occupational health nurses have the responsibility to advance governance systems.

In concurrence, Fitzmaurice et al. (2020) note that clinical nurse specialists work in a specific clinic or part, e.g., medicine, or emergency medicine, that require structured systems to coordinate for the quality response effectively. They are innovative, trained registered nurses who concentrate on improving the health care provided within their specialities.

All participants (QO1, CA1, CA2, CA3, CA4, QO2, and QO3) acknowledged that patient safety and quality of attention are common concerns for healthcare professionals, it is critical for nurse managers and different clinical individuals (including doctors) to pay attention of the systems in place. These objective individuals can collect the safety ideas – reflections – arising out of clinical interactions with the systems; these reflections were associated with this situation, occupational health and safety, communication and team function, patient care, and clinical practice. Based on the participant's responses, there is evidence of the need for adequately structured clinical audit plans.

6.1.10. SEHA and its HCFs annual clinical audit plan (theme 7)

All auditors must complete the clinical audit cycle to make sure that the required changes are implemented. SEHA and each of its healthcare facilities should have an annual clinical audit plan, governed by key clinical audit professionals from the quality department at SEHA and its HCFs. The goal should have a list of proposed clinical audit projects that need to be assessed. There was a consensus that each audit should have reference to the established standards and a timeline of completion. Two respondents CA1 and CA2 acknowledged that several practitioners that work as a team could undertake audits. The participants' indicated that care providers must be involved in all critical parts of the audit. The participants also noted that clinical audit topics obtained from essential members/leads at SEHA and facility, such as chair of clinical departments, should be regarded as critical issues/trends/incidents or complaints that would require investigation through clinical audit. All the participants acknowledged the importance of sticking to the set procedures and standards in clinical audits and required multidisciplinary cooperation and coordination based on proper leadership support (Healthcare Quality Improvement Partnership, 2017) (Fitzmaurice et al., 2020).

6.1.11. Leadership support (theme 7 and 8)

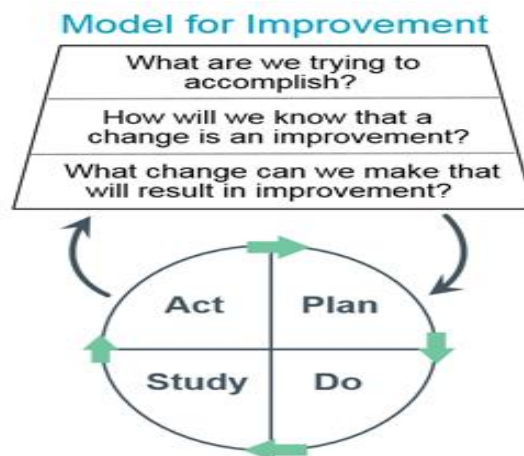
There was a common consensus among all participants that to ensure these national clinical audits promote quality development and operate effectively in collaboration with their respective professional societies, strong clinical leadership is crucial. In professional practice, clinical audit leaders must also have a clear understanding of the issues faced by local clinical supervision in ensuring that clinical leadership is successful.

According to the participants, such intervention should define how data will be collected for a clinical audit while ensuring data protection provisions. In professional nursing practice, patient privacy is paramount in quality care (Algora et al., 2018). The participants have also highlighted these insights during the interviews. According to Algora et al. (2018), leadership should facilitate paths for defining the right way to analyze the data for the clinical audit on a care pathway. The participants showed an appreciation of the need for proper leadership styles based on the hospital setting's multidisciplinary nature. As observed, the Plan-Do-Study-Act (PDSA) cycle offers guidance on effective clinical audits and is therefore recommended in the procedures.

6.2.1. The PDSA

In practice, the PDSA provides insights into the steps necessary for proficiently implementing more effective audits that respond to the dynamic hospital space. The participants generally observe that, in theory, one will never only once use the PDSA Method since it is meant to be a continuous tool for change (Johnson, 2016). If one is to complete one PDSA cycle, he/she needs to start another one, using the previous set as a starting point.

Figure 8: PDSA cycle, adapted from the Institute of Healthcare Improvement (IHI), (<http://www.ihl.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx>)



This Plan-Do-Study-Act (PDSA) process shows a simple device for testing changes that will lead to transformation. PDSA is at the centre of the framework for transformation used by the Association for Healthcare transformation (Crowfoot et al., 2017). According to Crowfoot et al. (2017), this cycle requires all four testing components — planning the experiment, seeking it out on a smaller scale, analyzing the effects, and then working on what is taught.

Crowfoot et al. (2017) recognize the Plan-Do-Study-Act (PDSA) Worksheet from the association as a valuable tool for documenting the effectiveness test. The PDSA cycle is shorthand for testing the result by developing a plan to try the effect (idea), carry through the experiment (do), discover and learn from the consequences (study), and decide what changes should be made to this experiment (act).

The PDSA (Plan-Do-Study-Act) method was used for planning and assessing tests of difference. The PDSA relates to this particular method in improvement science that promotes small-scale modifications in the process and a systematic way to examine those changes and spread them throughout the system.

According to Little et al. (2019), this PDSA method arises from business, Walter Shewhart and Prince Deming's voice of repetitive procedures, which finally turned into the four PDSA phases. Little et al. (2019) note that the PDCA language was developed following Deming's early

teaching in Japan. The terms PDSA and PDCA are often used interchangeably for the method. In summary, this PDSA method uses the formal four-stage cyclic teaching approach to modify changes aimed at improvement. In the 'plan' stage, the change aimed at improvement is described, the 'do' stage involves carrying out the transformation plan on a smaller scale while the 'study' phase studies the success of this change, and the 'act' scene identifies adaptations and following steps to change the new cycle (Gillam et al., 2013).

6.2.2. Effectiveness of PDSA

As per the participants, the Plan-Do-Study-Act (PDSA) cycle is used in all SEHA HCFs as the model to create tests and implement change – by designing it, hearing it, observing the outcomes, and working on what is learned. After conducting a little experiment of effect, learning from the impact, and refining the result through the number of PDSA cycles, the result is applied more widely. The Plan-Do-Check-Act (PDCA) cycle can be used as the framework for change, too, as continuous improvement. The American Society for Quality ASQ (2011) said, "The plan-do-check-act cycle is the four-step framework for carrying out effect" (Nam, 2019). The human resource department can implement this administration program in conjunction with the data system sector. This safety education can be conducted by the safety engineer of the information systems department, and the human resource department can manage private education. The information systems director can oversee this entire process. Based on the research procedures, the research data is deemed credible.

6.3. The PDSA and clinical audits

Quality improvement, defined as the level to which standards are adhered to in service, advances with clinical audits that ensure that expected outcomes match the current professional criteria (Jam, 1997). This might be seen from the different stakeholders' perspectives. The 'desired' results may be different for healthcare professionals, managers, and patients. Patients look for a

treatment that is right for their needs and at how it is delivered. On the other side, healthcare professionals focus on effectiveness and look for a treatment that works best for their patients. Healthcare managers are most likely to be interested in efficiency and maximizing the population health gain with limited budgets. The variety of different outcomes reveals the multidimensional nature of quality. The first stage to measure quality is to think about what dimensions are significant and how you can measure its quality (Gillam, 2013).

The PDSA is frequently used to introduce, test, and refine potential quality improvements on a small scale before large scale implementation is made. While clinical audit reviews of clinical care meet the defined quality standards and monitor progress to address shortfalls. The PDSA is most effective when a procedure, process, or system requires changing or a new approach, method or system is to be introduced. On the other hand, clinical audits ensure compliance with specific clinical standards and drive clinical care improvement.

Three respondents recommended the PDSA complete cycle, acknowledging that the procedure takes less time than a clinical audit, which may take over six months. According to the participants, a PDSA relies on conducting more than one cycle in a short time to ensure the optimization of processes in relatively short periods. The participants also recognized that the PDSA focuses on specifically defined areas for improvement. Clinical audits, on the other hand, look at broader aspects of care and, in most cases, represent more opportunities for improvements. It also can explain the timeframe difference between both tools.

Studies have shown that some organizations such as the Institute for Healthcare Improvement (IHI), have used a model for improvement that relies on the foundations of clinical audit and Plan-Do-Study-Act cycles, which was illustrated in three key areas (Institute for Healthcare Improvement, 2020): (1) what we are trying to achieve, (2) how will we know if we have improved, and (3) what changes can we make to improve, see figure 5.

Based on the discussions, it could be deduced that finding similarities between the two quality improvement tools should help and facilitate the implementation of clinical audits across SEHA. The respondents agree that most healthcare professionals are familiar with the PDSA.

6.4. SEHA Clinical Audits Strategy Framework

Based on these findings and comments obtained from all participants, it is apparent that care providers prefer adopting a clinical audit strategy that sets out an applicable model for clinical audits within the care context at SEHA and its HCFs. As discussed, the proposed procedures should allow for team coordination and provide direction for all personnel participating in clinical audit activities. It includes processes and prospects for recording and approving clinical audit work proposals and producing and planning clinical audit projects (Al Jaber et al., 2016).

Four participants QO1, CA1, CA4, and QO2, suggested that the clinical audit strategy should have an overall aim that will define its scope and critical messages to end-users. For instance, the method can aim to use the clinical audit to improve the quality level at SEHA over the next two years. Strategies focus on creating a clinical audit culture committed to learning and continuous organization development (Healthcare Quality Improvement Partnership, 2017). In addition to the aim, the participants recognized that the set of objectives that describes the SEHA approach to clinical audit must establish a robust system for reporting and develop a partnership approach with relevant stakeholders. It is agreed upon that it is essential to ensure SEHA and its HCFs are compliant with the UAE DoH requirements (Department of Health, 2017). As per the specified standards, HCFs must have the following components:

- Clinical audit policy

- Clinical Audit Training Programme
- Clinical audit annual plan with a list of clinical audits

A strict action plan with clear roles and responsibilities and a time frame for completion is recommended to secure and govern the implementation process and ensure effective execution.

Throughout the interviews, it emerged that the design of a strategic framework should define connections with key stakeholders, who are critical to the success of the framework implementation. Leadership, for instance, can support enforcing compliance with the clinical audit policy. Participants QO1, CA1, CA4, and QO3, acknowledged that the efficiencies in communication within the organization are a vital factor in the success of the implementation.

As could be deduced from the participants' interviews, the SEHA Clinical audit taskforce's main aim is to govern the clinical audit strategy implementation. DoH (2017) concurs, emphasizing that the design and establishment of any clinical audit policy, such as the one proposed for SEHA, should facilitate several quality assessment interventions. Based on the experience of the participants in their respective workstations, the clinical audit taskforce should encourage the establishment and implementation of SEHA and its HCFs clinical audit training program. According to the DoH (2017), membership and participation in the taskforce should come from SEHA corporate and clinical audit/quality members from all HCFs. Also, the intervention should ensure that all SEHA HCFs are compliant with UAE DoH clinical audit requirements. The figure below (figure 6), created by the researcher, highlights the key proposed components of the clinical audit strategy framework for SEHA, critical stakeholders for its success, and its governing taskforce.

Figure 9: SEHA Clinical Audit Strategy Framework (Created by the researcher, adopted from the HQIP clinical audit strategy guide)



6.5. Key anticipated challenges for the implementation of clinical audit strategy

Anticipating critical challenges before the implementation of a clinical audit strategy in SEHA and its HCFs will help overcome any delays, incidents, or interruptions. Listed below are some of the critical challenges that one is likely to encounter during the implementation stages, along with suggestions to overcome them (Healthcare Quality Improvement Partnership, 2017).

- Developing and maintaining the clinical audit policy, a timetable for drafting, consulting the SEHA corporate and its HC's, agreeing and correcting any changes to create or update the system; all these details can be time-consuming and sometimes challenging to complete with agreements from all parties.

- Lack of senior management engagement in the process, where leaders are not interested nor have time to spend on quality improvement.
- Lack of engagement of clinical staff can be related to time constraints or lack of interest.
- Low quality in conducting clinical audit practise can be related to a flawed clinical audit methodology, failure to implement actions or failure to communicate results with relevant stakeholders.

All the participants acknowledged that the implementation process should involve all relevant stakeholders. These may include HCFs quality teams, senior management, and the corporate quality team. Five of the participants, QO1, CA1, CA4, QO2, and QO3, particularly emphasized that there should also be strong communication. With agreed roles and responsibilities, there is consensus that such steps can help govern a taskforce of key staff to manage the implementation of the clinical audit strategy in SEHA and its HCFs.

6.6. Study Limitations: One of the critical limitations of this study is having data only from seven participants to make decisions and define what is needed to change. Moreover, benchmarking between different facilities is not a comfortable process when only a limited amount of data is available. Moreover, time is a significant limitation for this study. The COVID-19 pandemic witnessed during this year has caused further delay to this project since the researcher's role within SEHA was heavily involved with inspecting, monitoring, and supporting HCFs coping with the pandemic. In addition, an adjustment was made to the data collection methodology, changing from face-to-face interviews to internet calls interviews, with difficulty in recruiting participants, as all quality personnel were busy during the pandemic.

Chapter 7: Conclusions and Recommendations

This study investigated clinical audits, and it is intended to disseminate the findings and recommendations in a presentation. The discussion appreciates that introducing healthcare audits is not a new concept but assessing its effectiveness and impact on the quality of care is considered a process and requires change. It is the quality improvement process that most healthcare employees, have for some time now made a part of their daily practice. Healthcare auditing aims to monitor which standards are met for any given care act, determine why specific standards are not met, and describe and make changes to practice in order to meet those standards. These standards should be demonstration based and may be clinical, e.g., Chest Cancer Management measures, or non-objective, e.g., Document management standards.

In our discussion, the significant changes in the approach to the administration of care in Abu Dhabi, based on Abu Dhabi Health Care Organisation, SEHA's clinical auditing strategy framework, were discussed. The design is based on the Plan-Do-Study-Act (PDSA) cycle and shows a simple way of testing changes that will transform healthcare. The PDSA is at the centre of the framework used by the association for healthcare transformation.

As observed, the clinical audit cycle requires the four components of planning and assessing the level of care, analyzing the effects, and then working on what is needed for change and sustaining the growth. When designing the measuring tool, consider the outcome of the previous attempts to address the effectiveness of the audits processes and direct the focus on critical issues of measurement necessary to achieve the intended improvement level.

In several countries around the world, including the Emirate of Abu Dhabi, the United Arab Emirates, the desire to produce the best results in healthcare delivery, has guided health sector changes. As a young state with a growing economy, the Emirate of Dubai government has embarked on a mission. In this case, the clinical audit strategy was based on the 2006 welfare system reforms of the government of Abu Dhabi. It is understood that SEHA has grown as an independent, public joint-stock company founded to operate and build public hospitals and clinics in the Emirate of Abu Dhabi.

The new approach allowed all persons to take out health insurance and provide a consolidated system for the electronic claims process and an increased degree of oversight and openness as a part of business regulation. SEHA has significantly helped in the development of centres that offer care based on the proposed models. Some of these hospitals include Al Mafraq Hospital (Abu Dhabi), Al Ain Hospital (Al Ain), Tawam Hospital (Al Ain), Sheikh Khalifa Medical City (Abu Dhabi), Al Corniche Hospital (Abu Dhabi), and Al Rahba Hospital (Al Rahba). One study identified substantial variations in the rates of treatment use among UAE nationals who usually employed outpatient health facilities every month relative to ex-pats, whose usage rates were 3–4 times lower.

SEHA acknowledges that to ensure the facilities managed by the corporate represent evidence-based practices and are of high quality, it must assess the efficiency of clinical practice. The goals for an appropriate clinical audit strategy have been necessary for SEHA and its HCFs quality management that aim to enhance patient treatment outcome and clinical performance through a thorough analysis of treatment against explicit requirements, and the application of reforms, and the fulfilment of its regulatory (DoH) requirements for clinical audits. The elements of the treatment structure, methods, and results are chosen and regularly measured against detailed criteria and standards. Where confirmed, improvements are accomplished at the personal, team, or service level, and then there is further testing to validate progress and change.

The clinical audit strategy relies on SEHA's lead auditor, responsible for approving the annual SEHA and its HCFs' clinical audit program. Then confirmation to SEHA executive board that its clinical audit performs satisfactorily. The HCFs' data systems are responsible for the collection of data to promote clinical audit actions. SEHA should agree that no documentation for audit reports and activities can be issued until the audit project is registered and has obtained an audit registration number. A clinical audit registration database is vital to keep track of all clinical audits, eliminate any duplication, and to inform senior leadership on current progress for all clinical audit projects. Patient electronic records are responsible for supplying case information to facilitate clinical audit projects.

In sustaining quality care from clinical audits, it is apparent that healthcare auditing is an information-based activity on the quality of care and procedures. It is the responsibility of all clinicians to ensure that they give the sincerest attention to their patients. All clinicians should be scrutinizing their jobs. They must apply the findings of accounting to improve clinical care and move towards the best practices, i.e., auditing, which is an essential instrument for continuously improving the quality of provided care. The clinical audit framework highlights the importance of having critical components that will lead to success in implementing the clinical audit strategy.

7.1 Recommendations

First, get approval from the SEHA senior leadership and report it to the corporate department of quality. Second, approach all relevant stakeholders or people – at SEHA and its HCFs – who are affected by this work, and it would also help get feedback from them. Finally, ensure a healthy communication flow between all stakeholders at SEHA and HCFs levels, from the start until the end of implementing the clinical audit strategy.

The SEHA clinical audit policy development will aim to standardize the clinical audit practice across SEHA and its HCFs. A clinical audit training program that will increase the number of auditors in each HCF will help healthcare professionals understand how to conduct a clinical audit, what is required to complete a project, and whom to contact for assistance. Other recommendations for SEHA include:

- A clinical audit plan in SEHA and its HCFs is essential to have improvement impacts on clinical audits. As established earlier, this enables the clinical audit team to monitor the registered clinical audits.
- Leadership involvement and support throughout the implementation of the clinical audit strategy is vital to its success; they can facilitate it, and SEHA staff will have to listen to them.
- Key stakeholders such as SEHA healthcare professionals must be aware of the implementation process, kept informed of what is required, and trained on conducting clinical audit projects in SEHA and their HCF.
- Clinical quality staff engagement is also recommended. These staff members will act as the clinical audit leads and govern the clinical audit policy, training, and planning within their facility.
- Communication is a vital part of the implementation of the clinical audit strategy. The recommendation is to send regular and clear messages to senior leadership and frontline staff to inform them of the progress of the developments of the policy across SEHA and its HCF's.
- Sensitization that a critical driver for implementing the clinical audit strategy is the HCFs fulfilment of the Department of Health (DoH) requirements for Clinical audit.

All of this can be governed and managed through a clinical audit task force, having members from all SEHA HCFs, that has the precise aim and objective of developing the clinical audit

strategy across SEHA and its HCFs. Besides, the taskforce should regularly report progress to a senior SEHA committee such as the Quality Council.

7.2. Stakeholders and further future research:

Key stakeholders include the medical division, nursing division, physiotherapists, and pharmacists. The significant benefit is an improved knowledge base in the various disciplines in improving patient-centred care quality. It investigates Professional Care interventions and the impact on the patients against the set standards and patient satisfaction levels. Further studies are recommended for assessing the effectiveness of the implementation of the clinical audits and their effects on an increase in the knowledge base when it comes to administering holistic patient-centred care in SEHA.

Appendix A

University Ethical Approval Letter



0207/2020

APPLICATION NUMBER: 8105

Dear Anas Salah and all collaborators/investigators

Re your application title: Healthcare Service Improvement through Clinical Audit

Supervisor: Catherine Shalks Karr Cunningham

Co-investigators/collaborators:

Thank you for submitting your application, I can confirm that your application has been given APPROVAL from the date of this letter by the Health and Social Care Ethics Sub-Committee.

The following documents have been reviewed and approved as part of this research ethics application:

Document Type	File Name	Date	Version
Aims, objectives and hypotheses	A Review of the literature on the nursing role in clinical audit	07/06/2006	1
Further details	IPL4016- Revised programme plan proposal final	30/06/2019	1
Methods and data	IPL4016- Revised programme plan proposal final	29/07/2019	2
Materials	Semi-structured Interview Form	28/08/2019	1
Permission/Agreement Letter	Permission letter	07/11/2019	1
Data Protection Act/Checklist	(LSI) Data Protection Checklist	14/11/2019	1
Travel Approval Form	Risk Assessment Form AS	17/03/2020	1
GDPR Declaration	Data Protection Form V2 AS	17/03/2020	1
Further details	The requested change	17/03/2020	1
Resubmission Response to Feedback Summary	The requested change v2	19/04/2020	2
Participant Information Sheet	Study Consent Form v3	19/04/2020	3
Participant Information Sheet	(LSI) Participation Information Sheet (PIS) v3	20/04/2020	3

RECOMMENDATION: PLEASE DELETE YOUR SEHA EMAIL ADDRESS ON P.10.

Although your application has been approved, the reviewers of your application may have made some useful comments on your application. Please look at your online application again to check whether the reviewers have added any comments for you to look at.

Also, please note the following:

1. Please ensure that you contact your supervisor/research ethics committee (REC) if any changes are made to the research project which could affect your ethics approval. There is an Amendment sub-form on MORE that can be completed and submitted to your REC for further review.
2. You must notify your supervisor/REC if there is a breach in data protection management or any issues that arise that may lead to a health and safety concern or conflict of interests.
3. If you require more time to complete your research, i.e., beyond the date specified in your application, please complete the Extension sub-form on MORE

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and submit it your REC for review.

4. Please quote the application number in any correspondence.

5. It is important that you retain this document as evidence of research ethics approval, as it may be required for submission to external bodies (e.g., NHS, grant awarding bodies) or as part of your research report, dissemination (e.g., journal articles) and data management plan.

6. Also, please forward any other information that would be helpful in enhancing our application form and procedures - please contact MOREsupport@mdx.ac.uk to provide feedback.

Good luck with your research.

Yours sincerely

Gordon

Dr Gordon Weller

Chair: Health and Social Care Ethics Sub-committee

Appendix B

Employer Ethical approval letter

From: SEHA Research <research@seha.ae>
Sent: 07 November 2019 9:19 AM
To: Anas Qasem Salah <ansalah@seha.ae>
Cc: Hamda Ahmed Al Beshr <hbeshr@seha.ae>;
Mariam Saleh Al Harbi <mariharbi@seha.ae>
Subject: RE: letter from the employer re-research

Dear Primary Investigator,

Thank you for your submission of the research project entitled "The use of Clinical Audit cycle for Improvement in Abu Dhabi Health Service Company "SEHA" submitted to the central Human Research Ethics Committee on the 06th Oct 2019.

As the questioner doesn't include any access to patient or employed data nor it will be with patients, the committee has granted you an "Approval" to conduct the study.

Thank you for the opportunity to review the proposal and we look forward to other studies in the future.

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