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The Implementation of a Professional
Development Programme for Family
Medicine residents in the Primary Health Care
Corporation, Qatar

Dr. Noora Al Mutawa

A Dissertation submitted in part fulfilment of the degree
of MSc Leadership in Health Professions Education, Institute
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The Implementation of a Professional Development Programme for Family Medicine residents in the Primary Health Care Corporation, Qatar

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Abbreviations

ACGME	Accreditation Council for Graduate Medical Education
ACGME-I	Accreditation Council for Graduate Medical Education-International
CIPP	Context Input Process Product
FMRP	Family Medicine Residency Program
HE	Higher Education
HEI	Higher Education Institutions
OD	Organizational Development
PBLI	Practice Based Learning and Improvement
PGY	Post Graduate Year
PHCC	Primary Health Care Corporation
QI	Quality Improvement
RCSI	Royal College of Surgeons in Ireland
SBP	System-Based Practice

Abstract

This change project centers on the implementation of a professional development program for Family Medicine residents in Primary Health Care Corporation. Like many other residency programs in the region, the Accreditation Council for Graduate Medical Education International (ACGME-I) Outcome Project was recently launched by Family Medicine Residency Program in Qatar. The aim of the project was to equip family medicine residents with the important knowledge and skills related to managerial, legal and communication issues. And the long-term goals were to optimize the residents' chances for career success and to provide high-quality services in primary care practice. It is a planned, sequential, long-term program that includes a strong emphasis on the non-clinical career enhancement competencies already identified and prioritized by the ACGME-I. These competencies include Professionalism, Interpersonal and communication skills, Practice-based learning and improvement and System-based practice. Using the Senior and Swailes Organizational Development model to support the change, a five-day professional development program was developed and delivered to 39 Family Medicine residents from four Post Graduate Year levels. The Kirkpatrick's four-level model was used in the evaluation. A positive reaction to the program was achieved as well as improvement in residents' knowledge and skills. While the results are promising based on the initial evaluation of the project following implementation, it is clear, however, that a longer study on whether the effect of the program on residents performance is sustained is required and this will require ongoing evaluation and input from all those attending.

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Chapter 1: Introduction

1.1 Introduction

Residency training has experienced many developments within the last few years. The primary goal of modern medical education is to train students to become competent physicians. Graduate medical education has undergone a paradigm shift from process-oriented towards outcomes-oriented system of education (Musick, 2006). There is general agreement that medical education curricula must be outcome and competency based (Bordage & Harris, 2011; Vandewaetere et al. 2015). In response to the general concern that *'residents were not adequately prepared to practice in the rapidly changing health care environment'* (Singh et al. 2005, p. 1196) the Accreditation Council for Graduate Medical Education (ACGME) has identified six core competencies that all accredited graduate medical education institutions must address (Kerfoot et al. 2007; Varkey et al. 2009; Pensa et al. 2013). The ACGME outcome project has inspired fundamental change in medical education (Swing, 2007). All ACGME accredited residency programmes must assure individual resident competence in the following six core competencies (Canal et al. 2007; Swing, 2007):

1. Patient care that is compassionate and effective
2. Medical knowledge about evolving clinical science
3. Professionalism
4. Interpersonal and communication skills that result in effective information exchange
5. Practice-based learning and improvement that involve evaluation of their own patient care
6. System-based practice that involves awareness of the larger context and system of health care.

Quality patient care ensues when residents acquire and apply these competencies effectively (Swing, 2007). Consequently, professional development programmes for residents are expected to be highly integrated with ACGME core competencies. Education in the State of Qatar is one of the basic pillars of human development and social progress. Qatar has recently invested considerable resources in education, research and development. Improving higher education is one of the main outcomes of the Education and Training Sector Strategy 2011-2016. Like many other residency programmes in the region (Abdel-Razig & Al-Amri, 2013) the ACGME-International

(ACGME-I) outcome project was recently launched by the Family Medicine Residency Programme (FMRP) in Qatar. This change initiative was introduced mainly to fulfil the non-clinical career enhancement competencies namely; professionalism, interpersonal and communication skills, practice-based learning and improvement, and system-based practice.

The purpose of this chapter is to provide an overview of the organizational context, rationale for selecting this project and aim and objectives of the project. It will be followed by discussion of the role of the writer in the organization and the project. The chapter ends with summary and conclusion.

1.2 Organizational Context

The FMRP in Qatar is a 4-year programme with a capacity of 10-12 new residents each year. The programme mission is to ensure graduation of competent family physicians that are capable of providing excellent patient care that meets the new health care challenges in the community. As the program fulfils the ACGME-I requirements for the accreditation process, the goal of the ACGME outcome project is to ensure that programmes assess each resident's mastery of the six general competencies with a focus on outcome evaluation (ACGME, 2007). The residents are medical graduates from various backgrounds and nationalities who have successfully passed the requirements of the Medical Education Department in the State of Qatar.

1.3 Rationale for carrying out the project

In planning a higher education programme for health professionals it is very important to have a clear mission and vision statements that are reflecting the education sector and the national vision. The core mission of higher education in the State of Qatar is to optimize student talents and capabilities, develop student knowledge, skills and attitudes that are compatible with labour market needs, support the needs and of the society and the population with a high degree of social

and moral responsibility & to conduct scientific research for producing knowledge (Education and Training Sector Strategy, 2011-2016).

In 2008, Qatar National Vision 2030 (QNV 2030) was released, which explains national goals and values. Its main aim is to transform Qatar into an advanced country and to provide its entire people with high standards of living. Qatar National Development Strategy (NDS) 2011-2016 reflects the nation's blueprints for the advances across several sectors including the Education and Training Sector. The Education and Training sector strategy reflects that continuous participation and commitment of all stakeholders, and the involvement of stakeholders from other sectors and the society, is a key for success of implementation of the strategy. Appendix (1) offers a broad overview of the achievements that the strategy must accomplish. One of the main achievements is higher education improvement, which is aligned with labor market needs and continuous development and ongoing training. Furthermore, implementing the Professional Development Program for residents, will equip them with the main knowledge, skills and attitudes needed to deliver high quality services to the wider community. This is in line with PHCC vision and goals, particularly excellence in workforce:

'By developing and expanding a skilled and motivated workforce to deliver better health outcomes for the public.' (PHCC, 2013-14,p. 12).

And excellence in organizational learning and development:

'By ensuring the organization as a whole has the culture and systems in place which enable it to continuously improve.' (PHCC, 2013-14,p. 12).

People and knowledge are the key assets, and there is a need to increase emphasis on continuous innovation (Senior & Swailes, 2010). What the society need is caring physicians who take patient safety as their priority, has updated knowledge, has effective communication skills and are professional (Harden, 2007). Today, the expected outcomes of medical education programmes have become more defined in terms of core competencies and roles (Bordage & Harris, 2011; Vandewaetere et al. 2015). The ACGME Outcome Project has influenced medical education in the US as it provides a framework for thinking and a common language in medical education (Swing, 2007). The main challenge for the medical education programmes in the State of Qatar recently is to meet the accreditation requirements.

Preparing residents for future practice and acquiring knowledge on management of health systems is one of the ACGME requirements. This programme should prepare residents to assume leadership roles in their practices, their communities, and the profession of medicine. The programme should include current billing practices, designing and managing a budget, assessing practice staffing needs, responding to the impact of new technologies on practice, determining value in the marketplace, assessing customer satisfaction, measuring clinical quality, learning about office scheduling systems, alternative practice models, and employment law and procedures. Residents should also learn principles of public relations, media training, and personnel management (ACGME, 2007; ACGME-I, 2011).

In spite of many challenges, residency programmes must consider new curricular innovations to meet the requirements (Byrne et al., 2012). One of the efforts initiated in our department in response to the ACGME requirements was the development of a professional development programme for residents. Following the successful implementation of the programme, this programme will become a permanent item in the FMRP curriculum. It will provide 20 hours block course of the total 100 hours required training in the management of health systems (ACGME, 2007; ACGME-I, 2011). While the remaining 80 hours required are distributed longitudinally in the FMRP curriculum over the duration of residency. Personnel presenting are Expert facilitators from the Royal College of Surgeons in Ireland (RCSI) and the Primary Health Care Corporation (PHCC). A study carried out by Guerrero et al. (2012) to understand what residents perceive as most helpful in the acquisition of ACGME competencies concluded that more focused research on design and implementation of learning activities is needed for practice-based learning and system-based practice. Residents indicated lower helpfulness scores for learning activities for these competencies. Professionalism remains a significant educational challenge. Teaching of professionalism is increasingly complex, and many program directors do not consider themselves successful at fulfilling the competency of professionalism. The medical literature suggests pedagogical approaches (Kesselheim et al. 2012). Training for Communication skills is important to equip students with the fundamental knowledge and skills required for influential information exchange in their practice (Dopherty et al. 1992).

1.4 Aim & Objectives

1.4.1 Aim

The aim of the project was to equip family medicine residents with knowledge and skills related to managerial, legal and communication issues. The long-term goals were to optimize the residents' chances for career success and to provide high-quality services in primary care practice.

1.4.2 Objectives

The objectives of the project were as follows:

1. By 30th October 2014, Family Medicine Resident's Professional Development Programme will be developed, that is 100% consistent with ACGME-I requirements.
2. By 27th November 2014, 95% of all Family medicine residents will have attended the five-day professional development programme.
3. By 27th November 2014, 90% of all family medicine residents, who have attended the programme, will show an improvement of the score in the post-programme assessment compared to pre-programme assessment by a minimum of 10%.
4. By 31st December 2014, 90% of all family medicine residents, who have attended the programme, will demonstrate improvement in professionalism and communication skills in Faculty evaluation.
5. By 31st December 2014, 90% of all family medicine residents, who have attended the programme, will achieve a minimum of 80% of agreement on general satisfaction and professionalism dimensions in post-programme patient satisfaction questionnaire.

1.5 Role of the student in the organization and project

This is an Organization Development (OD) project underpinned by the action research approach, with change and improvement of educational practice as the primary outcome. Therefore, if the changes were effectively implemented, students would have some ownership of these developments. In consideration of the

relationship between students and the institution in the higher education setting, the student is a co-producer rather than a consumer and need to be engaged in the production, application of knowledge and in their own development (McCulloch, 2009).

The writer is a Consultant in Family Medicine and a full-time trainer in the FMRP, which gives her the authority to be responsible for the organization and the designing of similar programmes. In collaboration with facilitators from RCSI and PHCC, the author was responsible for curriculum planning, facilitating the process of programme, implementation and follow up of logistics. The author was fully responsible for the data collection and evaluation of the programme.

1.6 Conclusion

Leaders in residency programmes are challenged to develop and implement educational strategies to meet the demands of students and more recently the accreditation requirements. The ACGME general competencies serve as a common language and a framework for organizing graduate medical education. The change initiative of the implementation of a professional development programme for residents includes a strong emphasis on the non-clinical career enhancement skills already identified and prioritized by the ACGME-I requirements. The principle outcome is the development of highly qualified physicians who are able to provide high-quality services in primary care practice.

Chapter 2: Literature Review

2.1 Introduction

Today, medical education stresses that future health care professionals require the joined acquisition of multiple competencies such as decision-making, communication skills and management skills. The implementation of sound instructional design principles is strongly needed (Vandewaetere et al. 2015). Future physicians need skills in patient care as well as management of patient care. The ACGME Outcome Project was one of the most significant drivers of curricular change across all graduate medical education (Kolva et al. 2009). In response to this requirement, the FMRP at PHCC in Qatar starts to set about redesigning the curriculum to meet the accreditation standards. This is a literature review of professional development programmes for residents that focus on the implementation of the four non-clinical competencies namely professionalism, interpersonal and communication skills, system-based practice (SBP), and practice-based learning and improvement (PBLI). This chapter provides a discussion of the main themes related to the implementation of a professional development programme for family medicine residents based on a detailed review of the literature. This will be followed by a highlight of the implications from the literature review on the project.

2.2 Search Strategy

In this literature review, the following databases were searched, PubMed, CINAHL and Google Scholar for the period Jan 2005 to Jan 2015. Database search was supplemented by manually examining bibliography lists of the included articles. This brought about 153 articles collectively. The articles were reviewed and further selection was made based on relevance. Conclusively, 35 articles were included in the review. To be included in the review articles had to be published after 2005, in English, target accredited residency programmes in the US, Europe or Middle East, and the focus is the implementation and curriculum changes addressing the four mentioned competencies. Articles were excluded if the primary focus was on undergraduate students or practicing physicians. Since few articles specific to family medicine were found in the results, non-family medicine articles were included when

some modifications might be applied to adapt family medicine curricula. There was a paucity of articles from the accredited residency programmes in the Middle East. As the focus was ACGME accredited residency programmes, most of the articles included were related to US-based residency programmes.

2.3 Review of Themes

There were four themes identified in the literature reviewed. The themes were identified and included if they were observed in two or more independent sources. The first theme was Practice Management (PM) curriculum that targets three ACGME competencies; professionalism, system-based practice, and practice-based learning and improvement. The second theme was mainly related to Professionalism. The third theme was System-Based Practice (SBP), and Practice-Based Learning and Improvement (PBLI). The fourth theme was the implementation of professional development programmes for residents in Family Medicine or equivalent programmes.

2.3.1 Practice Management Curriculum

Currently, ACGME requires residency programmes to provide 100 hours training in the management of health systems (Kolva et al. 2009). There is no standardized design of PM curriculum. Family Medicine was recognized as the first specialty to highlight the importance of practice management skills and to require residency training in practice management. Maintaining up-to-date PM curriculum poses a challenge for most FMRPs (Taylor et al. 2006; Kolva et al. 2009).

Taylor et al. (2006) argues that a variety of educational methods has been used for teaching practice management. The format of PM curricula in this study was longitudinal, single rotation or seminar. Formal lectures, didactic sessions and rotations in a community physician's office were some of the methods used. They concluded that PM curricula appear to be effective in enhancing confidence of residents practice management skills. A systematic review carried out by Kolva et al.

(2009) found that educating residents about managed care, in a one-week block rotation, resulted in significant improvement in resident's scores. Guerrero et al. (2012) argues that some educators have incorporated teaching of the competencies in specific learning activities, for example, teaching PBLI in morbidity and mortality conferences, or providing didactic teaching on professionalism and communication skills.

Active learning plays an important role in contemporary medical education. This might be achieved through practical exercises that complement the didactic material (Kolva et al. 2009; Singh et al. 2005). The use of external experts and/or organizational staff was noted in the majority of the programmes implementing PM curricula. They find that a Faculty Champion role needs to be empowered to facilitate an effective curriculum (Kolva et al. 2009). Guerrero et al. (2012) hypothesized that residents rated lowest scores in adequacy of learning for Problem Based Learning and Improvement (PBLI) and System Based Practice (SBP). They argued that for PBLI self-reflection and analytical skills are needed to acquire this competency and they emphasized the importance of implementing heterogeneous multiple teaching methods. Another important interpretation is that residents' understanding of these competencies is limited. Residents considered faculty role modelling a very critical learning activity, particularly for professionalism.

2.3.2 Professionalism

Professionalism is a required competency by the ACGME and the medical literature suggests pedagogical approaches. However, it remains a great educational challenge (Kesselheim et al. 2012). There is a universal acceptance that professionalism is the dedication of the individual to self-monitor and improve (Wilkinson et al. 2009). In ACGME language, it is the respect for patient and others, commitment to excellence and the ongoing professional development. Self-directed lifelong learning is an important aspect of medical professionalism (Lockspeiser et al. 2013). Since professionalism is considered a complex area, a combination and aggregation of multiple tools and multiple assessors is usually required to assess this competency. It is more towards 'Doing' in Miller's pyramid rather than 'knowing'

(Miller, 1990). Formative evaluation is one of the assessment tools. Wilkinson et al. (2009) argues that the patient's opinion as in multisource feedback is very important as the patients are the key stakeholders of health service and the main reason for the profession of medicine to exist. However, some patient populations can be more critical and external factors might have a great impact on how the patient views his/her doctor. Therefore, the interpretation of the results must be in conjunction with a clear understanding of the population that have been surveyed and in conjunction with other assessment tools. Single simulations as in OSCE 'Show how' in Miller's Pyramid are unreliable (Wilkinson et al. 2009).

Curricula, that target non-clinical competencies such as professionalism, showed that there is a discrepancy on what trainees learn in formal education and what trainees observe when supervised by faculty in clinical practice (Wong et al. 2010). Samarakoon et al. (2013) argues that there is a challenge nowadays of conveying a great amount of knowledge in a limited period in a way that is effective to be retained by students. Therefore, there was a move from the didactic teacher-centred to the interactive student-centred approach in teaching. Students, who understand their learning styles, can identify the learning techniques that best suit their learning styles and result in a greater educational satisfaction (Samarakoon et al. 2013). Goal setting and planning has been proven to have a great impact on the learning process (Lockspeiser et al. 2013).

2.3.3 Systems-Based Practice and Practice-Based Learning and Improvement.

SBP and PBLI competencies are related to the more general domain of Quality Improvement (QI) (Varkey et al. 2009). Medical education programmes are facing the challenge of training new physicians on the competencies required for QI (Czabanowska et al. 2012). To meet the ACGME accreditation requirements and to address PBLI and SBP, the Mayo school of Graduate Medical Education have established a QI curriculum website. There is little-published literature describing the institution-wide initiatives to teach and assess PBLI and/or SBP. In one initiative of institution-wide curriculum for 47 residency programmes using didactics and

discussions of topics including Medicare, socioeconomics, cost containment and communication skills, the curriculum was well received by faculty and residents. Among the potential benefits are the interaction between residents and the efficient use of content experts. Extensive benchmarking was done in the first three months to identify the most effective teaching and assessment strategies (Varkey et al. 2009).

To prepare residents for future practice, the acquirement of knowledge and skills in QI and patient safety has been defined as a requisite in graduate medical education (Byrne et al. 2012). Academic medical institutions, with residency programmes, are expected to lead in teaching QI and must develop educational models for training in QI (Canal et al. 2007). Barriers, to implement the programmes, include limited time, lack of faculty knowledge and interest and the absence of resident leadership (Byrne et al. 2012).

The competency of SBP implies the awareness and reaction to the larger context and systems of health care (Kerfoot et al. 2007). Njeim et al. (2012) stressed the importance of incorporation of SBP in resident education to satisfy ACGME requirements. Topics that fall under this domain include health policy, health care quality and access, and patient safety. The standards for SBP competency are in need to be established to promote the acceptance of trainees training in this domain (Kerfoot et al. 2007). There is a growing necessity to teach QI and patient safety in medical education (Wong et al. 2010; Byrne et al. 2012). Wong et al. (2010) undertook a systematic review to determine the most effective educational methods to teach QI and patient safety curricula and to identify factors that enhance or limit the successful implementation of the curricula. They classified learning outcomes by using Kirkpatrick's model. Most curricula in the study used combined didactic and experiential learning and case discussions. Wong et al. (2010) argue that the implementation of adult learning methods and involvement of residents in QI projects led to significant improvement in the process of care. Competing educational demands and the recognition of learners presented a major issue for curriculum implementation. Wong et al. (2010) pointed that a number of studies emphasized the importance of 'safety culture' to enhance curricular success. There was no comment on the degree that curricula had been sustained. The literature indicates that

educational curricula focused on QI and patient safety has improved knowledge and can lead to important improvement in patient care. It is highly emphasized that these curricula, to succeed, requires the engagement of educational and organizational stakeholders (Wong et al. 2010). Training in SBP aims to improve resident's skills in systems thinking, teamwork, health care financing and patient safety. Potential barriers to implementation include resources, faculty development and the teaching of QI in a clinical context. To improve interaction in didactic sessions, they suggested group exercises, audience response system and response to questions and discussions (Varkey et al. 2009).

Programme Directors find it challenging to teach and assess PBLI and SBP (Varkey et al. 2009; Kerfoot et al. 2007). Residency programmes must consider new curricular revolutions to meet the requirements regardless of the challenges (Byrne et al. 2012). Further research is needed to evaluate the cost-effectiveness of the programme and its sustained impact on learner knowledge, skills and attitudes, as well as patient outcomes (Varkey et al. 2009). The six identified ACGME competencies can be considered as comprehensive QI models if they address essential dimensions for QI, such as leadership and management in order to reach effectiveness and efficiency in patient care (Czabanowska et al. 2012).

The literature shows that Family Physicians/General Practitioners are the most frequently visited physicians, particularly in Europe (Czabanowska et al. 2012). As the gatekeepers to other specialties and the patients' advocates in health management, holistic understanding and participation in the quality improvement in the medical system is essential. Application and evaluation and improvement of QI frameworks provide effective professional development curricula for family physicians (Czabanowska et al. 2012). Residents need to understand and appreciate the clinical relevance of SBP, as for the educational programmes and requirements to be addressed appropriately (Kerfoot et al. 2007).

2.3.4 The Implementation of Professional Development Programmes for Residents in Family Medicine or equivalent programmes.

The family physicians of today need to be able to reflect on the organizational

systems and to effectively participate in changing and development of the systems in order to improve quality of care (Czabanowska et al. 2012). In a pilot study done by Berkenbosch et al. (2013) on the implementation of practice management module for medical residents supported the need for mandatory medical management training as part of the postgraduate medical curriculum. The module implemented focus on two themes only 'knowledge of healthcare system' and 'time management' as a way to combine the learning of a theoretical topic and a skill. Berkenbosch et al. (2013) pointed that medical management is a broad subject therefore it is not possible to cover all areas in one training session and a training module is required. The selection of the topics was indicated by literature review as well as residents' needs assessment. They chose instructors to be content experts. The teaching methodology was through active learning by stimulating participant engagement during sessions and homework assignments. The module was evaluated by pre and post-test. The recommended important topics to be included in practice management training are negotiation skills, career opportunities, legal issues and leadership skills as shown to be important for the practicing physician (Berkenbosch et al. 2013).

'Leadership of improvement processes' has been identified as important skills for health care professionals who are playing a key role for more effective health care delivery systems. One of the suggestions for curriculum improvement was to understand and be able to apply concepts of SBP in the clinical setting (Pensa et al. 2013). Jones et al. (2008) described the implementation of practice management programme for surgical residents. The programme is a series of 10 lectures given monthly. Medical and surgical residents attend these modules. It addresses mainly SBP competency. It was shown to be a successful course to improve residents' practice management skills. The format was didactic lectures combined with the actual chart reviews. Swing (2007) explained that several programmes reported the addition of lectures or conferences to enhance residents' knowledge of specific competencies particularly interpersonal and communication skills, professionalism and system-based practice.

2.4 Implications for the Project

It is evident from the literature that FMRPs are facing the challenge of addressing the non-clinical ACGME competencies (Kolva et al. 2009; Varkey et al. 2009; Canal et al. 2007; Kerfoot et al. 2007; Swing et al. 2007; Taylor et al. 2006). Residency programmes must consider new curricular revolutions to meet the requirements regardless of the challenges (Byrne et al. 2012). Active learning and adult learning strategies and the use of combined teaching methodologies were strongly emphasized as important curricular components to enhance participant engagement (Wong et al. 2010). It was suggested that the main limitation is faculty lack of expertise to teach these competencies. Faculty development and the use of subject matter experts were suggested (Varkey et al. 2009; Berkenbosch et al. 2013). Potential barriers to implementation include limited time and resource, lack of faculty knowledge and interest, and the absence of resident leadership (Varkey et al. 2009; Byrne et al. 2012). It was highly emphasized that for the curricula to succeed requires the engagement of educational and organizational stakeholders (Wong et al. 2010).

2.5 Conclusion

There is a broader perspective on what constitutes a competent physician with increased focus on professionalism, systems issues, safety and communication. There is growing evidence that the outcomes of quality clinical care in modern medicine are not dependent on doctors' clinical knowledge only, but the skills of dealing with the rapid flow of updated information and in effectively managing available resources. The literature shows that Graduate medical training programmes are expected to provide comprehensive curriculum to prepare physicians to be competent to practice in the complex evolving nature of health care systems. Our change initiative is expected to be an effective approach to meet this demand and to address ACGME competencies required. The acquisition of knowledge and skills associated with the general competencies prepares the residents to improve the quality of patient care.

Chapter 3: Methodology

3.1 Introduction

Health care organizations are facing substantial pressure for change in response to the rapid advancements in medical and health care delivery systems to provide high-quality services (Harden, 2007). The Accreditation requirements present a further challenge. Change initiatives often fail because organizations tend to implement a number of activities too quickly without proper planning. The current challenge for administrators, policymakers and faculty of higher education institutions is to acknowledge and accept that there have been significant and irreversible changes in societal demands, funding shortfalls, competition, technological innovations, and student demographics. As a result, there is a critical need to move creatively to confront and adapt to these changes (Senior & Swailes, 2010).

Recently, organizational development (OD) has recurred as a key element for the management of change. It permits better use of financial, human and technological resources and more likely to deliver the required performance improvement (Senior & Swailes, 2010). This chapter provides an overview of the methodology of the change project undertaken by the writer. The chapter provides a critical review of approaches to organizational development, the rationale for the OD model selected by the writer. It will be followed by an explanation of the change project using Senior & Swailes OD model. The chapter ends with a summary and conclusion.

3.2 Critical Review of Approaches to Organizational Development

'Change is a continuous process of confrontation, identification, evaluation and action' (Paton and McCalman, 2008, p. 217). The approach to change is mainly dependent on the type of change. Change might be developmental when the focus is the improvement of skills, transitional when it seeks to achieve the desired state compared to existing one, or transformational that results in overall change of organizational structure, processes and strategy. Transformational change results in an organization that continuously learns, adapts and improves (McAulliffe & Van Vaerenbergh, 2006). Planned change is known to be the most commonly adopted theory to implement change initiatives (Mitchell, 2013). Factors that will continue to

push organizations to change include increase mobility and infusion of cultural differences in the workplace, creativity, and information & communication technology (Senior & Swailes, 2010). In the health care environment the main driving forces for change are professional obligations, advances in science, attempts to increase patient satisfaction and promotion of workplace safety (Mitchell, 2013).

There are numerous approaches to planning and implementing change. Senior & Swailes (2010) have explained that some approaches are more appropriate to low complex 'difficult' situations 'hard systems model of change', while others are more appropriate to high complex 'mess' situations 'soft systems model of change'. Soft and hard systems of change are meant to enhance the work of organizations and the lives of those working in them (Senior & Swailes, 2010). Soft systems approach to change requires consideration of the cultural and political aspects of organizations as much as structure and systems (Senior & Swailes, 2010). Change agents should bear in mind that there is no holistic approach to change. They must understand that each model has its strengths and weaknesses and they must choose the model that best suits their situation (McAulliffe & Van Vaerenbergh, 2006). Senior & Swailes (2010) support that there is no best way to achieve successful organizational change, making efforts to know the different change models and its characteristics will help organizations to choose the appropriate change approach and to face the future with more confidence.

3.2.1 The Hard Systems Model of Change

The Hard Systems Model of change relies on the belief that clear objectives can be identified and looks for the best way to achieve them. The process in this change model has three overlapping phases:

1. Descriptive phase: identify objectives and performance measures.
2. Options phase: generate options and evaluate it against measures.
3. Implementation phase: develop implementation strategies and monitoring the results.

Although it is a practical approach, the hard systems model of change had limited applicability. Organizations are systems that are composed of interconnected subsystems, which include structures and processes, as well as culture, politics and leadership styles of different people in the organization. This indicates that, in most situations, a different approach model is required for such more complex systems (Senior & Swailes, 2010). They support that the organizational development (OD) approach is more suitable to manage change in more complex situations.

3.2.2 The OD Model for Change

The OD approach has been defined as:

“An umbrella term for a set of values and assumptions about organizations and the people within them that, together with a range of concepts and techniques, are thought useful for bringing about long-term, organization-wide change...”
(Senior & Swailes, 2010, p. 315).

OD is an approach to planned organizational change. It gives emphasis to process as well as content (McAulliffe & Van Vaerenbergh, 2006). OD is an approach that cares about people. People at all levels individually and collectively are the main drivers of change. OD approach, therefore, assumes that work groups and teamwork are fundamental in the process of implementing change. Diagnosing, planning action, taking action and evaluating action are the main stages of OD model of change (Senior & Swailes, 2010). Some of the characteristics that distinguish OD from other change management approaches are (McAulliffe & Van Vaerenbergh, 2006):

- It is a process for building, improving and renewing capabilities to bring out the best in organizations and people.
- It is interdisciplinary approach (behavioural science, business ...etc.).
- Action research oriented approach.
- Collaborative top-down, bottom-up approach and involving all stakeholders in the change process.

- Guided by professionally trained change agents either internal or external.
- Creating Learning organizations.
- Emphasizes the importance of sustained change.
- Initiatives may be targeted at individual, group or organizational level, depending on the change sought.

Senior & Swailes (2010) emphasized the significance of organizations for being learning organizations as the only way to survive and flourish. Learning organizations might follow a goal-oriented or a process-oriented approach to change. In the goal-oriented approach, the main focus is goal achievement. In the process-oriented approach, the main focus is changing the behaviour of people and the structures within which they work to achieve the vision.

Action Research has been known as the underlying philosophy for OD (McAulliffe & Van Vaerenbergh, 2006). It comprises multiple approaches, for example, clinical inquiry, action learning and reflective practice. Action learning is an approach that focuses on the development of people in organizations. The learning cycle includes planning, action, reflection and evaluation (McAulliffe & Van Vaerenbergh, 2006). The action research has been considered as an integral part of Organizational Development. Action research cycle of experiencing, reflecting, interpreting and taking action is embedded in each stage of OD process (Senior & Swailes, 2010).

3.2.3 Lewin's Model of Change

One of the most prominent models of change that is frequently referred to in the literature is Lewin's (1951) model of change. Lewin (1951) saw change as a three-phase process, unfreezing, moving and refreezing.

- Unfreezing phase: Concerns with increasing people awareness of the need for change.
- Moving phase: Concerns with implementing and communicating the new

strategies and structures that will move the organization to the new state.

- Refreezing phase: Requires protecting the changes from going back and reinforcing the change. It usually requires continuing involvement and support of top management.

Rather simplistic, Lewin's model has been criticized for describing situations as rigid 'frozen' rather than frequently accounted flexible situations in modern practice. However, Burnes (2004) considers that the three-phase model has much to offer in exploring change situations and resistance to change. The concept of refreezing has been criticized for suspending the changes while the aim actually is to prevent backsliding from the new situation. It tends to ignore the need for continuous change. This model was criticised as well for being top down and management driven (Mitchell, 2013). The process may appear more mechanistic than in reality, however, Lewin's model was of profound influence on the people who were working in OD, and this remains the case today (Senior & Swailes, 2010). Young (2009) suggests that in the change literature, the work of Lewin remains of strongest influence.

Planned change occurs in reality in the context of unplanned or emergent change. Planned change models like Lewin's model have been criticized for being discrete and close-ended events while in reality organizational change is a continuous, dynamic and open-ended process. It is more applicable to small-scale changes rather than transformational large-scale change. Change is occurring at a rapid pace and to reach a state of equilibrium is an unrealistic expectation (McAulliffe & Van Vaerenbergh, 2006; Mitchell, 2013).

3.3.4 Meta-Model of Change

A meta-analysis of the change literature was done by Young (2009), and he proposed a Meta-model of change 'a counselling – based model of change'. He identified pre-change as the first stage of the change process, which is being alert to the first warning signs of the potential need for change before it is being highlighted by a crisis. The second stage is stimulus and consideration, followed by validation of the need, preparation, commitment, do-check-act, and results that inform the new

normal, and then the journey restarts. Young (2009) studied the commonalities from a broad range of change literature in an attempt to provide a guide for more effective implementation of change. The commonalities that were found by Young (2009) were also a feature of consultancy literature, which supports the usefulness of the developed Meta-model.

3.2.5 HSE Change Model

The Health Service Executive (HSE) model has been developed to improve the experience of patients, to help staff to play a meaningful role in improving services and to promote a consistent approach to change. The HSE change model is based on four stages that interrelate and influence each other. The four stages are initiation, planning, implementation and mainstreaming. The planning phase is further subdivided into building commitment, determining the detail of the change and developing the implementation plan. Efforts spent on early stages contribute to successful implementation of the change. The HSE model is grounded in OD approach. The approach is combined with project management, which gives more discipline to the process. What is significant about this change model is that it pays particular attention to people and cultural aspects of change (HSE, 2008).

3.2.6 Enabling Change

3.2.6.1 Leadership and Change

Today, Higher Education Institutions (HEIs) require strong leadership, leaders don't need just to sustain the effective mission, vision and goals in their institutions; they need to communicate them effectively to their students and staff. The Hay Group's Leadership 2030 research claims that leaders of the future will require new leadership competencies in cognitive, emotional and behavioural levels. They must be highly collaborative both in and out the organization and have strong conceptual and strategic thinking skills. Additionally, they will have deep integrity, and it is

predicted that they will lead highly diverse and independent teams and they may not always have direct authority over them (Hay Group, 2014)

Change agents need to consider their leadership approach as it can significantly affect the outcome of the change project (Mitchell, 2013). Transactional and transformational leadership have been observed to varying degrees as leadership approaches in change initiatives. Transformational leadership have been recognized for the success of change initiatives by transforming a vision into objectives and helping the followers to change their behaviours as well as helping them to identify their full potential (Coghlan and McAulliffe, 2003). The emergent approach to leadership and service is the servant leadership, where people serve first and then lead as a way of service to individuals and organizations (McAulliffe & Vaerenbergh, 2006).

Leaders in contemporary HEIs are needed to develop new creative and interactive ways in approaching the tasks (Ancona et al., 2007). Academic staff needs to develop their leadership skills that allow them to cope with the rapid changes in Higher Education (HE). Consequently, in order to sustain leadership in HE, all higher education staff needs to be considered as leaders and to work collaboratively to face evolving challenges and prospects (Joyce & O'Boyle, 2013). Leadership in HE should be distributive in nature rather than hierarchical, looking at leadership as a shared responsibility (Lumby, 2012; Joyce & O'Boyle, 2013). The power of one is being challenged, and there is more focus on shared leadership and distributed leadership (Harris, 2003). It has been argued though that this principal is difficult to be adopted in some schools as it challenges the authority of the head and places him/her in a position of lack of direct control (Senior & Swailes, 2010). This poses a challenge for leaders on how to distribute responsibility and authority.

Senior & Swailes (2010) suggest that a leader facing constant change requires adopting a 'situational' leadership approach enabling them to develop different leadership styles to manage different situations. Hersey and Blanchard's (1993) situational leadership model (figure 1) has stood the test of time and is perceived by corporations as offering a credible world for training people to become effective leaders. The figure illustrates how the behaviour of a leader might change according to the level of maturity and readiness of the followers to accept responsibility and

make their own decisions. Furthermore, Leadership behaviour might change from selling, telling, participating or delegating according to the level of task and relationship. McAulliffe & Vaerenbergh (2006) argue that there is a contradiction between people-centred and task-centred leadership. When initiating structure, the leader tends to be more task-centred, while, through the process of change, the leader is likely to have relationships based on mutual respect and trust ‘people-centred’.

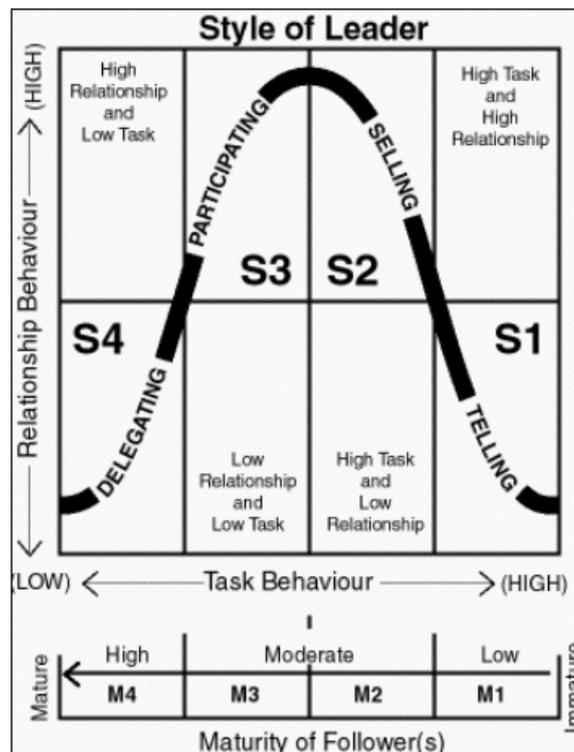


Figure 1: Hersey and Blanchard's theory of situational leadership

Leading change is a complex process. Karp & Helgo (2009) argue that change initiatives do not fail because of lack of ambitious visions and designs; they fail mainly because leaders tend to underestimate the complexities of change. Leaders need to balance long-term and short-term goals, they need to be visionary and pragmatic at the same time, and they need to be able to see the big picture and pay attention to global and local issues. Furthermore, leaders need to encourage individual accountability as well as teamwork (McAulliffe & Van Vaerenbergh, 2006).

3.2.6.2 Culture and Change

At times, failure of change initiatives is attributed to culture (McAulliffe & Van Vaerenbergh, 2006). There is no right or wrong, better or worse culture. We might decide as appropriate or inappropriate culture of the organization where the change is planned to be implemented. Understanding the culture in the context of change is critical for the success of that change. The concept of culture is complex. Within an organization, there are multiple sub-cultures reflecting different histories, personalities and values (Senior & Swailes, 2010). Subcultures can achieve success if it is flexible, open to research and evaluation, have a strong value base and have strong positive identity and self-image to exist in a competitive environment (McAulliffe & Van Vaerenbergh, 2006).

Due to the increasing requirement for creativity and innovation, many organizations tend to change their cultures to remain competitive. However, attempts to change culture are often problematic. Change agents need to be aware of methods of changing the strategies to take account of the culture. Organizational politics is part of the culture. Managing change raises the need for political actions to keep the interests of groups in balance (Senior & Swailes, 2010).

When the internal and external complexity and uncertainty is high, during change implementation, the change in an organization is referred to as 'chaotic change' (Karp & Helgo, 2009). Change agents must be aware that there is no single model that suits all circumstances and to accept that there is a degree of chaos during the change process. To be able to cope with chaos during change, Karp & Helgo (2009) supported to concentrate on identities and relationships in the organization. People are often open to further shaping of their agenda through communication and interaction. Leaders and employees have different views of change. Leaders see change as an opportunity and strength to innovate the organization; they also see change as a new professional challenge to advance their careers while, for many employees, change is often disruptive and not welcomed.

3.3 Rationale for OD Model Selected

Most public sector organizations are very complex, they adopt bureaucratic models, have large varieties of conflicting interests and values which make the OD application more sensitive, but not impossible (Senior & Swailes, 2010). Three criteria should be applied when choosing a change model (Burke, 1994):

- It should be feasible to work with.
- It should fit the organization as closely as possible.
- It should be sufficiently comprehensive.

The writer chose Senior & Swails OD model for its feasibility, fitness to the change project and for being sufficiently comprehensive. It is a planned process-oriented approach to change. Although OD interventions have been criticized for being more suitable for small-scale projects (Senior & Swailes, 2010, McAulliffe & Van Vaerenbergh, 2006), this gives a good rationale for being successful in the small-scale project implemented by the writer.

Senior & Swailes (2010) argue that not all change methods are transportable across national boundaries. Therefore, change agents must be aware of the western bias of what is written about organizations and change. However, globalization and global communication allow the transfer of ideas and processes, found to be effective in one place, to be tried in another.

3.4 OD Model (Senior & Swailes Model)

3.4.1 Diagnose Current Situation

This stage is strongly linked with the stage of developing a vision for change, hence the labelling of them as 1a and 1b (figure. 2). Each stage is feeding the other as it proceeds, which explains the zigzag arrow in figure (2) (Senior & Swailes, 2010).

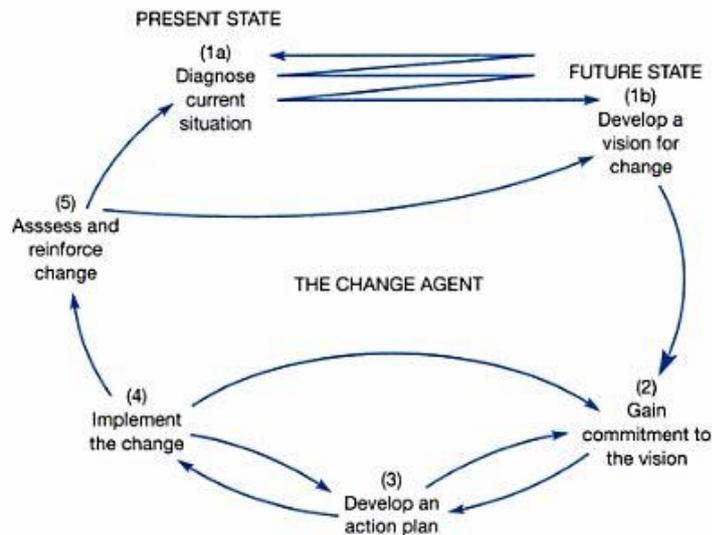


Figure 2: Senior & Swailes OD model of change

Source: Senior B & Swailes S (2010). *Organizational Change* (4th edn), Harlow: Prentice Hall, 2010, p. 328.

This stage forms the basis of the other stages of the OD cycle. It is the beginning of the data collection about the organization such as organizational goals and structure, leadership approaches, training, and development...etc. (Senior & Swailes, 2010). The writer linked the National Educational Goals of the Country and the goals of the Family Medicine Residency Program to formulate the project goals and outcomes.

Being able to diagnose change situations is important to manage change successfully. Techniques such as stakeholder analysis, SWOT, and force-field analysis can increase awareness of the current situation (McAulliffe & Van Vaerenbergh, 2006; Senior & Swailes, 2010). In a SWOT analysis, strengths and weaknesses are considered as internal to the organization and the opportunities and threats as external Figure (3). By conducting a SWOT analysis, the change agent was able to overview the strengths and weaknesses and ways to respond to them, was able to set ways to address threats, and to make use of opportunities (McAulliffe & Van Vaerenbergh, 2006).



Figure 3: SWOT analysis of the project

Force field analysis was carried out. Based on the work of Kurt Lewin (1951), to shift the change from the equilibrium, the driving forces need to be stronger than the opposing forces. It is a widely used tool to visualize various forces and to identify actions that support the implementation of the change. Figure (4) shows the force field analysis of the project. Head office support, financial support, improving residents' skills and fulfilling accreditation requirements were the main driving forces. On the other hand, time constraints, unavailability of qualified personnel, the cost of external facilitators, and cynical behaviour of middle management staff were considered as the opposing forces. Deciding on the strengths and importance of the forces helped the change agent to make an action plan to achieve the target through strengthening of driving forces and overcoming opposing forces. Furthermore, the results of such analysis gave an idea to which extent the organization is open or closed to change (Senior & Swailes, 2010).

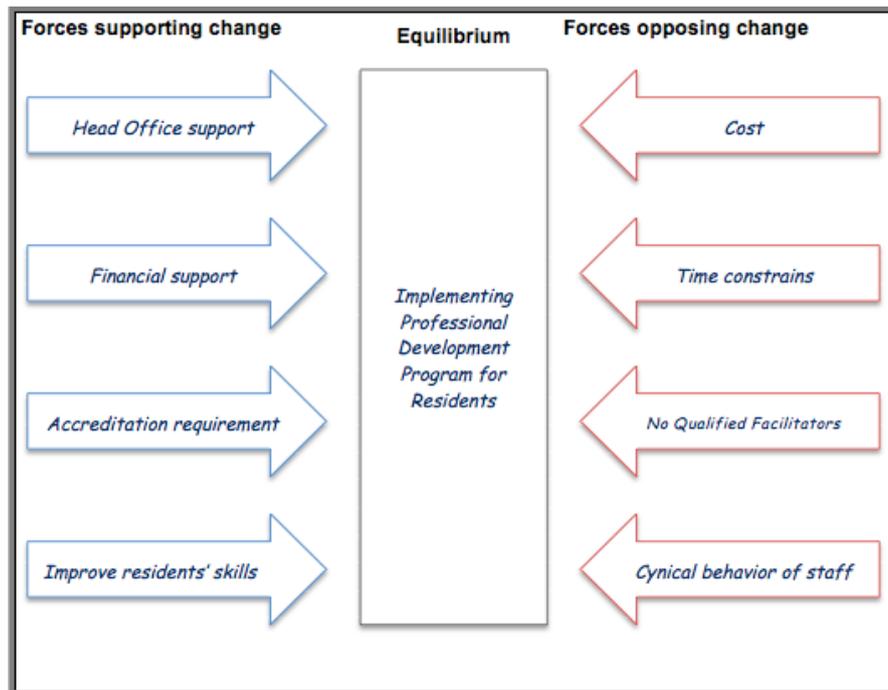


Figure 4: Force field analysis of the project

Coghlan & Casey (2000) argue that the key to success lies in assessing the power and influence of the important stakeholders. A stakeholder analysis was carried out by the writer (Figure 5). It was done according to the level of power and influence of the stakeholder. In the high power and low influence were the finance, facilitators and accreditation body, the main action for which is to keep satisfied. In the high power, high influence group were the Managing Director and the Department Head, the recommended action is to manage closely. The high influence, low power group were found to be the Media, Faculties, and the Focus group, the recommended action is to keep informed of what is happening. In the low power, low influence group were the residents and patients, the recommended action is monitoring. Part of diagnosing current situations is to determine how much and what type of resistance to expect, also to consider the appropriate approaches to managing resistance (Senior & Swailes, 2010).

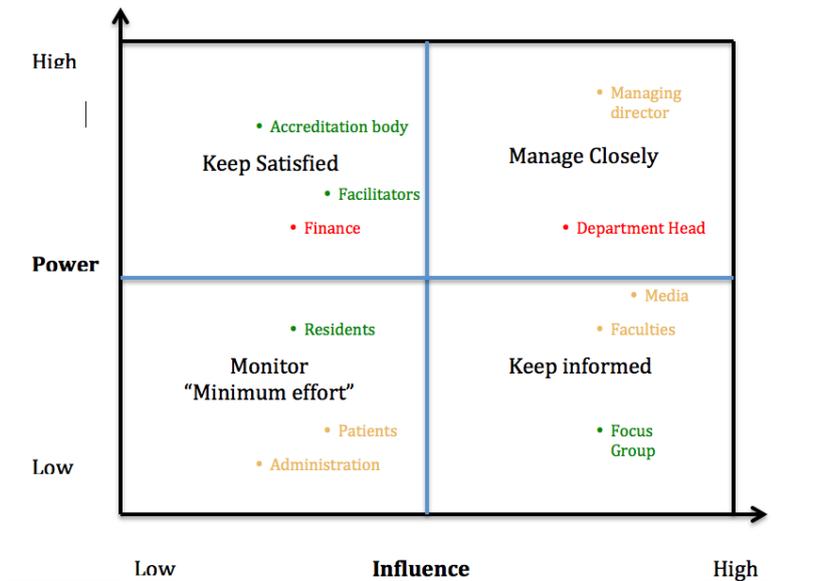


Figure 5: Stakeholder analysis of the project

Red – Against, Amber – Neutral, Green – For

3.4.2 Develop a Vision for Change

This is the creative phase in which something new is being looked for. Vision will increase commitment, as people will be working together to achieve a common goal (Senior & Swailes, 2010). In planning Professional Development Programs, for health care professionals, it is very important to have a clear vision that is reflecting the education sector and the national vision. The writer used this concept to create a vision that was communicated to all key stakeholders. The core missions of higher education in the State of Qatar are to optimize student talents and capabilities, develop student knowledge, skills and attitudes that are compatible with labour market needs, support the needs and of the society and the population with a high degree of social and moral responsibility and to conduct scientific research for producing knowledge. One of the main achievements is Higher Education improvement, which is aligned with labour market needs, continuous development and ongoing training (Education and Training Sector Strategy, 2011-2016)

The literature suggests that the main advantage of teacher leadership is to transform schools and institutions to professional learning communities that are client-oriented,

knowledge-based, and places a high value on professional development (Harris, 2003). The writer shared with the key stakeholders that the implementation of the Professional Development Program for residents will equip them with the main knowledge, skills and attitudes needed to deliver high-quality services to the wider community. This is in line with PHCC vision and goals, particularly excellence in workforce, and excellence in organizational learning and development (PHCC, 2013-14). Gattiker & Carter (2010) argued that, most companies have high level policy and value statements in place; however, it is not manifested widely in organizational projects. One of the main reasons they argued is resistance by personnel across various levels of the organization.

3.4.3 Gain Commitment to the Vision

This stage depends on feedback from stages 1a and 1b (Figure 2). It includes consultation and participation of all those involved in the change as a motivation to gain their buy-in to the new vision and the change process. It also involves the importance of managing resistance through discussion, negotiation and active participation. Establishing work groups and teams is significant in this stage (Senior & Swailes, 2010). Being sensitive to people's worries about the way tasks may be affected by the change and the emotional readiness for change is important. Leaders tend to ignore resisters, but resistance should be seen as a form of feedback that can enhance the change initiative (Senior & Swailes, 2010). Karp & Helgo (2009) argue that when people find identity issues such as roles, values and competencies, match their own agendas, they will start to react and respond to the change. People's identities are threatened by change initiatives and they start to challenge leaders and the way they lead. Leaders must remember that it is not possible to predict how people in the organization will react to change. Otherwise, they need to save their leadership time for forming identities and relationships in the organization. Leaders of change should have their own ways in influencing the direction of change by changing the communication in the organization.

The change agent communicated the project vision and goals with the important stakeholders. Karp & Helgo (2009) support that it is beneficial to communicate

organizational essentials such as goals and values; these can inspire people and have a motivational role. People will be motivated to adjust their behaviour if they believe in the purpose and if they have the chance to contribute.

Resistance to change is inevitable; people ability to change varies from one and another (Senior & Swailes, 2010; Mitchell, 2013). Although some form of resistance was encountered throughout the project, the writer was aware that it is a natural phenomenon and an important element to understand change (Coghlan & McAulliffe, 2003). The causes for resisting change might be due to different perceptions of change, misunderstanding or lack of trust, fear of inability to learn the new required skill (Kotter & Schlesinger, 2008). The writer tried to make resisters more committed to change by using some of the methods proposed by Kotter & Schlesinger (2008). Education and communication to persuade people who lack information, and negotiation and involvement for those who have power to resist change are examples of the methods used.

3.4.4 Develop an Action Plan

In this stage, the change agent needs to answer the following questions: How the vision can come about? Who is to guide the planning and implementation of the change? What needs to be changed to achieve the vision? Where the intervention should take place? (Senior & Swailes, 2010).

These questions were addressed by the writer and through the collaboration with the focus group the writer formulated an action plan for implementing the project. The action plan was a road map for the project that was linked to project objectives and the implementation phase.

The programme objectives and the timetable of the five-day programme were formulated in collaboration with RCSI facilitators (Appendix 2). It was linked to the FMRP curriculum and ACGME-I requirements. The change agent discussed it with the Programme Director and the Department Head to gain their contribution and buy-in. Upon approval, the objectives and the required topics were discussed with PHCC facilitators, who showed their willing and agreement. Furthermore, the objectives and

timetable were communicated with the focus group. The resources required were discussed and a request was sent to the Department Head for approval. The materials and handouts were prepared in advance and the venue was reserved. The project aim and goals were communicated with the focus group and an action plan was formulated. The roles and responsibilities were distributed to the members of the focus group and were continuously monitored by the change agent.

The role of the change agent is very important in this stage. The success of using an OD change approach is dependent on the capabilities of the change agent. Team building skills, networking skills, interpersonal and communication skills, negotiation skills and political awareness are all required skills that need to be possessed by the change agent. Being a core faculty in the FMRP the change agent found it challenging to address the work role and the role as a researcher as it requires much time and commitment. Coghlan & Casy (2010) referred to the importance of addressing organizational and research roles by the researcher, and managing organizational politics. Change agents are the authentic leaders who know what they are, are aware of their values and beliefs and are not trying to copy other persons (Senior & Swailes, 2010).

Leading change is a complex process and it does not imply to be a transformational leader in all situations, but to know when to use one style of leadership and not the other in that particular situation (Senior & Swailes, 2010). By revisiting Hersey and Blanchard's (1993) theory of situational leadership, the writer tended to adopt a situational leadership approach. The writer used different leadership styles that suit the task and relationship along with the readiness of the subordinates.

3.4.5 Implement the Change

Implementing a change that will transform the organization is a long-term process and sustainability of the change is the key. During this stage the emphasis was on communication, feedback on progress and teamwork (Mitchell, 2013). 39 residents were divided into two groups. Group 1: PGY1 & PGY2. Group 2: PGY3 & PGY4. A programme announcement was sent to all residents two weeks prior to the

programme implementation with the preparatory work required. Evaluation tools that were used to assess residents' behaviour were formative evaluation of residents and patient satisfaction questionnaires (Appendix 3). Pre-programme formative evaluations of residents by Faculty were collected one month prior to implementation. A waiver of consent form (Appendix 4) was obtained from residents' patients in continuity of care clinics. A full explanation of patient role in the study, patients who agreed to participate were requested to fill a patient satisfaction questionnaire. Patients were given an explanation that they would be given one-month appointments to fill in the post-programme questionnaires.

The programme was implemented in November 2014. On Day 1 of the Programme the residents were asked to sign a waiver of a consent form (Appendix 5), which was given by the Administrator. After signing the consent, a programme pre-assessment questionnaire was distributed which contained an assessment of knowledge questions and self-assessment questions of skills and attitudes (Appendix 6). To ensure anonymity, each resident was given a code number to be documented in the pre and post-programme questionnaires, thus the writer will be able to match the forms for analyzing the data. Personnel presenting were Experts, including RCSI and PHCC representatives. Active learning strategies were adopted through small group discussion, case studies and role plays. Didactic sessions were conveyed based on adult learning concepts and a high level of resident interaction. The subsequent days of the programme went smoothly, the residents showed enthusiasm to the subject and appreciation to the programme organization. By the end of the programme, post-programme assessment questionnaires were distributed which included similar questions in the pre-programme assessment as well as evaluation of programme content (Appendix 7). Formative evaluations were collected from Faculty one month after the Programme.

To keep the level of commitment to the vision; there must be short-term wins (Senior & Swailes, 2010). A short-term win might be in the form of better recognition and consideration of residents' points of view and maintaining their identities (Cubbon, 2000). Another short-term win was the fulfilling of the hours required by the accreditation requirements of training in management of health systems, which will reflect a good image of the FMRP. The setting and assessment of short-term wins

links the implementation stage to the stage of assessment of organizational progress towards the vision and the reinforcement of the change process (Senior & Swailes, 2010).

3.4.6 Assess and reinforce the Change

This stage involves the assessment of the extent to which change has been achieved and how far the organization has moved toward the vision. A real success of the change is by sustaining it (Senior & Swailes, 2010). The Programme Director expressed her appreciation from the feedback given by residents. By discussion of the programme evaluation results and the improvement of residents' knowledge, skills and attitudes with the Programme Director and the Department Head, would provide a good rationale for sustaining change and the implementation of the programme for the coming years. Effective communication was significant in each stage of the change process and it was an important attribute to the effective implementation of the change initiative. (Senior & Swailes, 2010; Mitchell, 2013).

3.5 Conclusion

Change is a prominent feature of health care environments. It is mainly driven by advances in technology and increased expectations of the public. OD is a process of enabling of organizational change and regeneration. Senior & Swails OD change model was employed to implement the change project. It was chosen for its feasibility, comprehensiveness and applicability to the project. Leadership is an important enabling factor for change. Taking consideration of cultural and political factors is of great value.

Chapter 4: Evaluation

4.1 Introduction

Educators are challenged to become innovative practitioners to address the needs of the ever-growing educational institutions (Jacobs, 2000). Programme evaluation is an essential responsibility for many educators with its main purpose is to determine the merit or worth educational programmes and to determine how these programmes could be improved (Dick, 2002; Cook, 2010; McNamara et al, 2010; Frey & Hemmer, 2012). Today, evaluation is not simply concerned with measurable outcomes only, but also with process, stakeholder roles and quality standards. New educational evaluation models have moved from simple measurement of outcomes towards more complex affairs of stakeholders' roles and the process of learning (McNamara et al, 2010). The literature emphasized the importance of planning programme evaluation at the initial steps of planning a programme, which will help to provide the highest quality and the most meaningful data (Morrison, 2003; Cook, 2010).

This chapter begins with a discussion of the different evaluation models. Then the writer will provide an overview of the organizational development structure and expected outcomes and will proceed to elaborate Kirkpatrick's' evaluation model and the rational for selecting the model. Within the discussion the writer will refer back to the aim and objectives of the project to reflect on whether those objectives were met. The chapter ends with a summery and conclusion.

4.2 Evaluation Models and Theories

Educational evaluation is progressively becoming a part of educational policy of many educational institutions. A critical step in planning evaluation is to involve all stakeholders; these might include administrators, students, teachers or funding agencies. Cook (2010) argues that an important factor in this step is to determine how the evaluation will be used (e.g. determining effectiveness, identifying areas of improvement, or enabling stakeholders in their roles). It is also helpful at this point to consider the need for summative evaluation, formative evaluation or both. Cook (2010) illustrated three main approaches to evaluation; objectives-oriented, process-oriented, and participant-oriented. Objectives oriented approach is a popular method

for summative evaluation. The strength of this approach lies in its simplicity, in which objectives are defined at the start of the programme and evaluated at the end if these objectives have been met. Process oriented approach provides both formative and summative evaluation. It starts by determining objectives and tracks what actually happens during implementation. It is a comprehensive approach. However, it is complex and resource exhaustive. Participant oriented approach involves qualitative data collection methods about how the people involved perceived the programme. Its main advantage is focusing on participants needs, however, it is costly and complex approach, and interpretation of data applies only to the local context.

Cook (2010) explained the importance of following the sequence of stems in order: selecting the outcomes, then measurement methods, then the instrument or tool, then the modality. He emphasized the importance of brainstorming the ideas with colleagues at each stage, which will open mind for multiple alternatives. Consequently, this will reduce possible bias in evaluation (Morrison, 2003). Moreover, outcomes should be aligned with programme goals and objectives (Morrison, 2003; Cook, 2010). Timing of evaluation (Summative, formative, or both) should be decided in advance of starting adult training programs (McNamara et al, 2010). Griffin & Cook (2009) highlighted the importance of closing the loop and acting on evaluation to successfully enhance the quality of learning.

Most educational evaluation experts agree that there is no single best model of evaluation, the choice of evaluation model is influenced by many factors such as: time, staff, resources, and the evaluators' own viewpoint about evaluation (McNamara et al, 2010). Medical Evaluators have an ethical obligation to improve their models and practice for the sake of benefit to clients and stakeholders. It is important for evaluators to consider the ethical dimensions to the models and the ways in which they are used. Therefore, it is important to subject our evaluation models to continuous reflection to assure its' consistency with ethical principles (Bates, 2004). The principle of equity implies equal opportunities for all people and the emphasis of freedom for all (McNamara et al, 2010). The author will describe four evaluation models in relationship to their theoretical concepts that informs program development: the

Logic model; Context/Input/Process/Product (CIPP) model; Jacobs' model, and Kirkpatrick's model.

4.2.1 The Logic Model

The Logic model is strongly linear in its approach to educational evaluation; however, it also involves system theory applications to educational programmes. Its simplicity makes it attractive to programme evaluators. Its main components are: Input, activities, outputs, and outcomes. Inputs include all relevant resources (funding sources, facilities, faculty skills, staff time...etc.). Activities are strategies, innovations or changes planned for the educational programme. Outputs might be difficult to be distinguished from outcomes in some situations. Outputs might include number of learners attending the program, faculty characteristics or number of modules created. Outcomes are divided to short term, medium term and long term outcomes. Complete Logic Model involves careful consideration of the context of programme and its social, cultural and political features. If carefully implemented, the Logic Model can generate sufficient descriptive data about the educational and its subsequent outcomes; however, it will not generate evidence for causal associations between programme activities and outcomes (Frye & Hemmer, 2012).

4.2.2 The CIPP (context/input/process/product) model

The CIPP approach implements system theory and complexity theory, it is flexible to support continuing programme improvement as well as summative evaluation of programme outcomes. The CIPP approach consists of four components that accommodate the changing nature of most educational programmes. The CIPP context evaluation study involves identification of programme goals and assessing needs, assets and problems related to the programme. The CIPP input evaluation study is useful during resource allocation (staff, budget, time) of planning an educational programme. The CIPP process evaluation study is used to provide formative information during programme implementation. This step recognizes if educational programme from one setting can be applied to a new setting putting in

consideration contextual differences. The product evaluation study is most aligned with the traditional summative evaluation of programmes found in other models but it is more extensive. It aims to identify programme outcomes including positive and negative outcomes, intended and unintended outcomes. The CIPP evaluation studies can be implemented formatively or summative. Educators need to be conscious that using this model effectively requires careful planning. Multiple data collection methods are required to provide effective results with CIPP studies (Frye & Hemmer, 2012).

4.2.3 Kirkpatrick's four level evaluation model

Kirkpatrick's four level models is a form of summative evaluation that was first introduced in 1959 by Donald Kirkpatrick. In 1996 the model was revisited by the author and he decided that the levels will remain the same (Kirkpatrick, 1996). Kirkpatrick's four level model has wide spread popularity in evaluating learner outcomes in educational programmes. The main reason of its wide spread use is its clarity, simplicity, and its focus on programme outcomes beyond simple learner satisfaction (Kirkpatrick, 1996; Bates, 2004; Frye & Hemmer, 2012). Kirkpatrick (1996) described the four levels of programme outcomes as the following:

Level 1: Learner reaction. This is a measure of how participants are satisfied about the topic, speaker, and schedule of a training programme.

Level 2: Measures of Learning. This is a measure of knowledge gained, skills improved, attitudes changed.

Level 3: Changes in learner behaviour. This is a measure of change of on the job behaviour because of training.

Level 4: The programme finally results in its larger context. This is a measure of final results such as higher productivity, improved quality...etc.

Kirkpatrick's model stimulates educators to increase their efforts in evaluating training and development activities (Dick, 2002; McNamara et al, 2010). This model

implies the assumption of reductionist linear theory and the relationship between causality of the programme and its outcomes (Frye & Hemmer, 2012). The main limitation of the model is: it does not consider contextual influences in the evaluation of training such as the climate for learning transfer and the adequacy of resources (Bates, 2004).

4.3 Overview of OD's Structure and Expected Outcomes

Preparing residents for future practice and acquiring knowledge on management of health systems is one of the ACGME-I requirements. In spite of many challenges, residency programmes must consider new curricular innovations to meet the requirements (Byrne et al., 2012). One of the efforts initiated in our department in response to the ACGME-I requirements was the development of a professional development programme for residents. It is a planned, sequential, long-term programme that includes a strong emphasis on the non-clinical career enhancement skills already identified and prioritized by the ACGME-I requirements. Personnel presenting were Experts, including RCSI and PHCC representatives. A five-day programme was structured by the writer in collaboration with RCSI Facilitators. Teaching methods included didactic teaching, case studies, small group discussion and team exercises. For Programme Timetable see appendix (2). A convenient sample of 39 residents was divided into two groups. Group 1 included PGY1 and PGY2. Group 2 included PGY3 and PGY4. Table 1 illustrates the distribution of residents by year of training. In Day one of the programme, residents who sign for attendance were given a waiver of consent form and the pre-programme questionnaire. The questionnaires were handed to the Programme Coordinator before the start of the programme. On Day 5 at the end of the Programme, residents were given a 45 min chance to complete the programme evaluation and post-programme questionnaire. The questionnaire focused on knowledge and self-assessment of skills and attitudes. The questionnaires and consent forms were delivered collectively to the writer to assure anonymity. Further analysis of the collected data was done by the writer in collaboration with an expert biostatistician using SPSS software.

Year of Training	Frequency
PGY1	12
PGY2	11
PGY3	11
PGY4	5
Total	39

Table 1: Distribution of Residents by year of training

The Expected Outcomes of the Programme were as the following:

1. Short-term outcomes:

Reaction to the programme and residents satisfaction is going to be measured through post-programme evaluation, which will focus mainly on the course content, materials and facilitators.

2. Medium-term outcomes:

The Implementation of the Professional Development Programme will equip the residents with the main knowledge, skills and attitudes needed to deliver high-quality services to the wider community.

3. Long-term outcomes:

The development of highly qualified physicians who are able to provide high- quality services in primary care practice. Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information with patients. Residents must effectively use hospital resources, consider cost of care and risk-benefit and work effectively in various health care delivery setting. Residents must be able to set learning and improvement goals.

4.4 Evaluation

4.4.1 Aim and Objectives

The aim of this project was to equip family medicine residents with knowledge and skills related to managerial, legal and communication issues. The long-term goals were to optimize the residents' chances for career success and to provide high-quality services in primary care practice.

The objectives of the project were as follows:

1. By 30th October 2014, Family medicine Resident's Professional Development Programme will be developed that is 100% consistent with ACGME-I requirements.
2. By 27th November 2014, 95% of all family medicine residents will have attended the five-day professional development programme.
3. By 27th November 2014, 90% of all family medicine residents who have attended the programme will show an improvement of the score in the post-program assessment compared to pre-program assessment by a minimum of 10%.
4. By 31st December 2014, 90% of all family medicine residents who have attended the programme will demonstrate very good professionalism and team working skills in Faculty Evaluation.
5. By 31st December 2014, 90% of all family medicine residents who have attended the programme will achieve a minimum of 80% of agreement on general satisfaction and professionalism dimensions in post-programme patient satisfaction questionnaire.

4.4.2 Methods & Measures

The author chose Kirkpatrick's four-step evaluation model to assess the results of the change project. The main rationale for choosing this model is its clarity, simplicity, and its focus on programme outcomes (Kirkpatrick, 1996; Bates, 2004; Frye & Hemmer, 2012).

- Reaction to the programme was measured through post-programme evaluation by residents, which focused mainly on the course content, materials and facilitators.
- Residents' knowledge and skills was assessed by pre-workshop questionnaires and were compared to the post-workshop questionnaires. Residents are expected to show an improvement of the score in the post-programme assessment compared to pre-programme assessment by a minimum of 10%.
- As a measure of behavioural change formative evaluation of residents was done pre-programme and was compared to the post programme formative evaluation. Then biannual formative evaluation will be done as a monitor of

progress of residents. Any decline in the resident performance in the competencies mentioned will be notified to the Programme Director, and that will raise the issue for the need of continuous formal training on these competencies.

- Patient satisfaction questionnaires were used as a tool to measure the change in residents' behaviour among patients. Pre-programme patient satisfaction was obtained from patients visiting residents in Continuity of Care Clinics. A waiver of signed consent form was obtained from patients with a full explanation of the patient role. The same patients was given a follow-up appointment two weeks post-programme, and another patient satisfaction form was obtained from them. Residents are expected to show a minimum of 80% agreement score on professionalism and general satisfaction dimensions post programme. Ongoing monitoring of residents progresses through patient satisfaction was planned to be done quarterly throughout the four-year residency program.

Table 2 explains the outcome evaluated against the objective addressed and the proposed evaluation tool.

Kirkpatrick level	Outcome Evaluated	Objective Addressed	Evaluation Tool
1	Reaction to the program	95% of all family medicine residents will have attended the five-day professional development program.	Post program questionnaire
2	Measures of learning (Knowledge, skills and attitude change)	90% of all family medicine residents who have attended the program will show an improvement of the score by a minimum of 10%.	Pre and Post program questionnaire
3	Behaviour Change	90% of all family medicine residents will demonstrate improvement in professionalism and communication skills in Faculty Evaluation.	Faculty evaluation of residents Pre & Post Program
4	Change in the organizational context among participants, learners and patients	90% of all family medicine residents who have attended the program will achieve a minimum of 80% of agreement on general satisfaction and professionalism dimensions in patient satisfaction.	Patient satisfaction Questionnaire Pre & Post Program

Table 2: Kirkpatrick's levels applied to the change project

4.4.3 Results

. **Level1. Reaction to the Program:**

Objective 2: By 27th November 2014, 95% of all family medicine residents will have attended the five-day professional development program.

39 out of 40 residents attended the program, which gives 97.5% attendance rate. This objective was met. The Demographic data of residents was analyzed and summarized in Table 3 and Figure 6.

Age	Frequency
>40	1
31-35	5
26-30	33
Total	39

Table 3: Distribution of Residents by age group

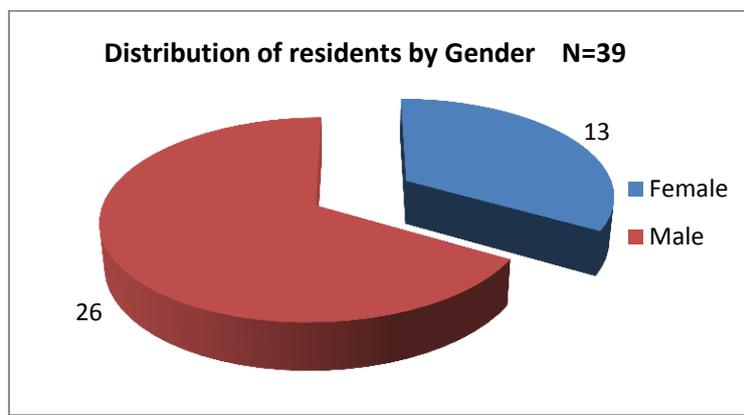


Figure 6: Distribution of Residents by Gender

The response rate of completed post-program evaluation for reaction to the program was 92%. 64% of those who responded strongly agree that the course was relevant to their needs and 36% Agree. 67% strongly agree that the course is appropriate to their levels, 28% agree and 6% were neutral. 61% strongly agreed that the course provided useful feedback, 28% Agree, and 11% neutral. 66.7% agreed that the course was challenging but not threatening, 27.8% agree and 5.6% neutral. The response of residents in post-program evaluation is summarized in Figures 7, 8, 9 and 10.

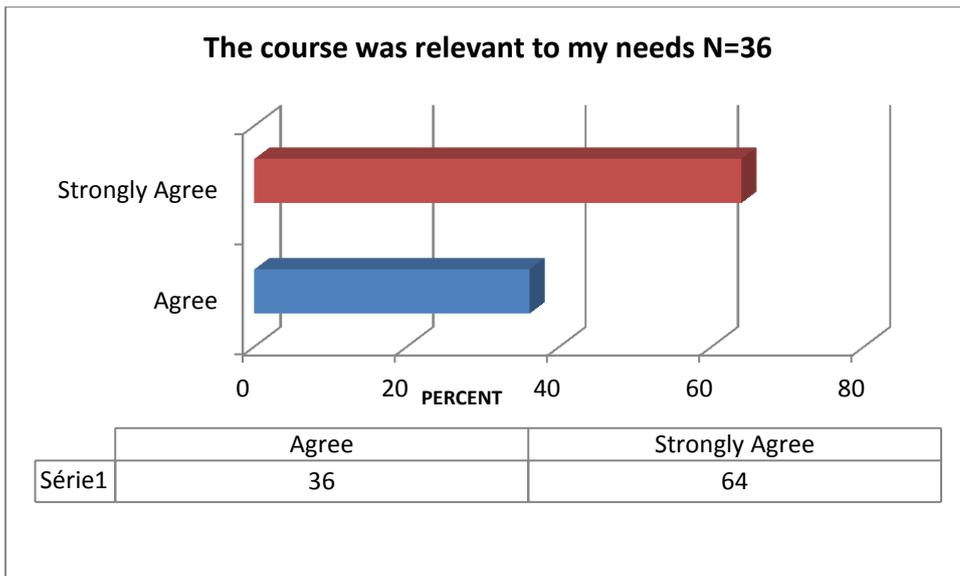


Figure 7: The response of residents in post programme evaluation-Relevant to needs

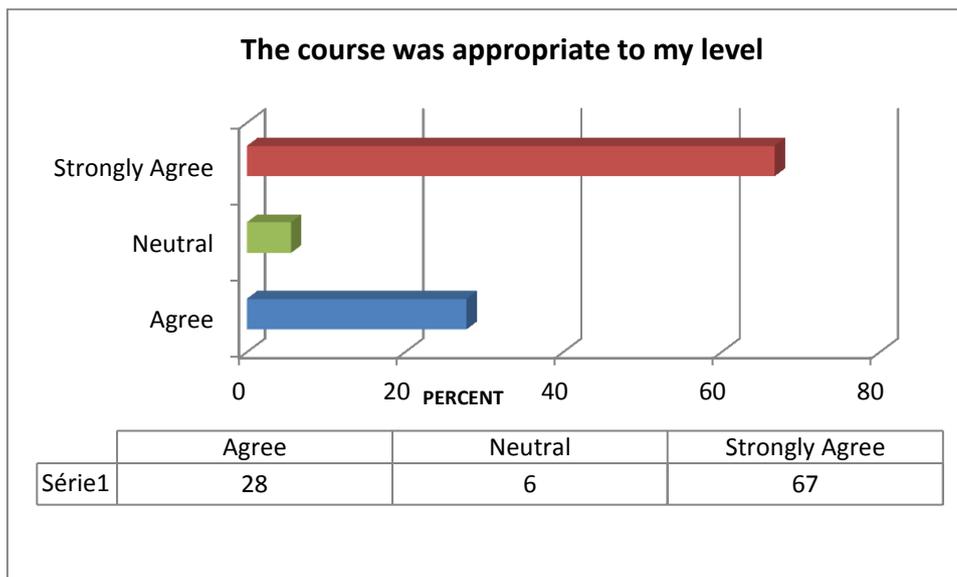


Figure 8: The response of residents in post-programme evaluation- Appropriate to level

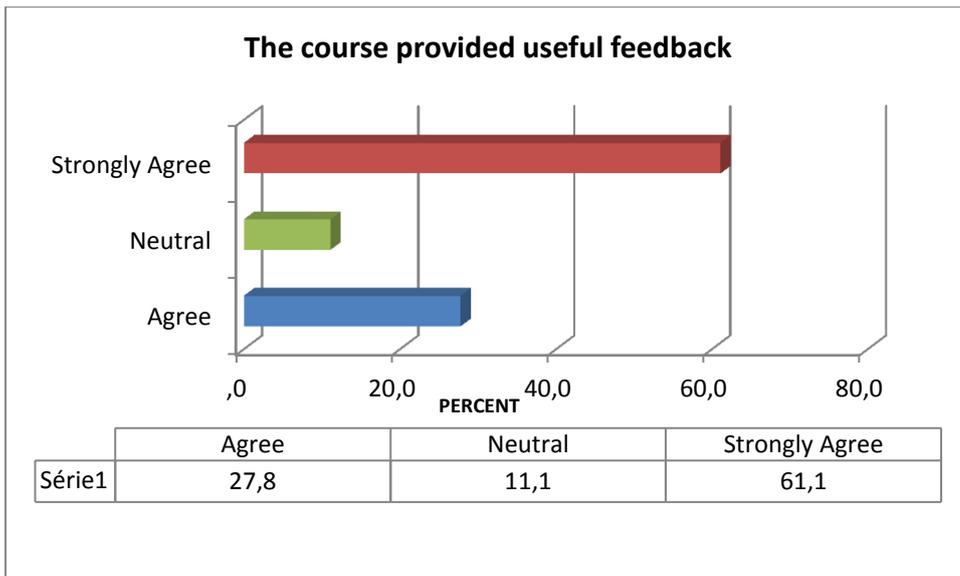


Figure 9: The response of residents in post-programme evaluation- Useful feedback

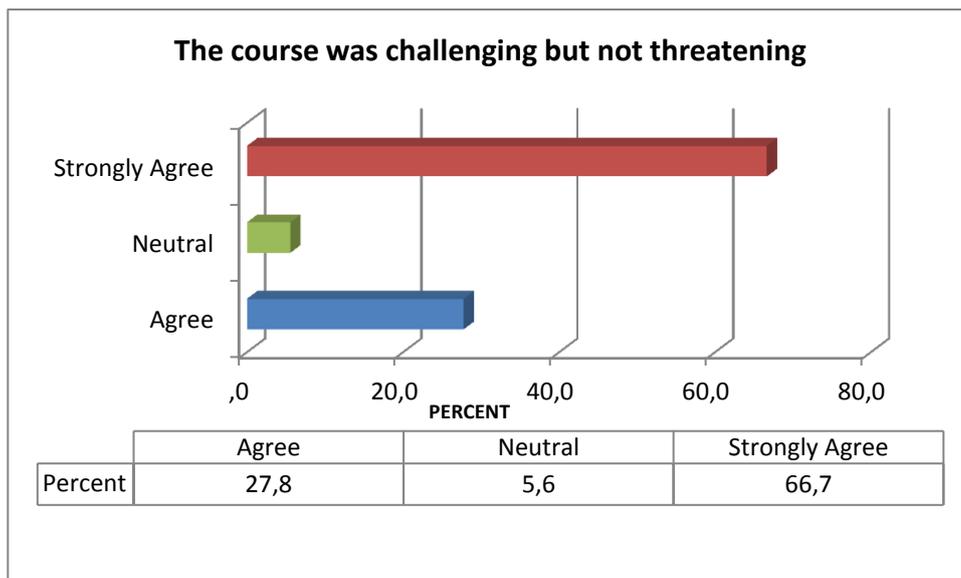


Figure 10: The response of residents in post-programme evaluation- Challenging, not threatening

Below is a caption of some of the residents' comments in the post-program evaluation form. From Group 1 the following comments were given:

Resident 1: "...One of the best courses I attended, it made me open my eyes over my weaknesses. Thank you."

Resident 2: "...Thank you for the interesting course."

Resident 3: "...Very helpful course."

Resident 4: "... Personally this experience I witnessed in this workshop was amazing ...it taught me how being a doctor is not restricted to medical knowledge. Time management, SWOT analysis, communication skills, medical errors and how to prevent them are all topics that by now I understand clearly. Thanks to this course. Thank you for this great, active teaching experience ...thanks to everyone who made this great workshop happens".

From Group 2 the following comments were given:

Resident1: "...Very good organization. Trainers were very helpful."

Resident 2: "...Discussed topics that meet the residency demands, it helped me in preparation for building my career."

Resident 3: "...We need all workshops to be similar, interactive sessions."

Resident 4: "...Thank you very much for preparing the course and looking forward to similar opportunities."

Level 2. Measures of learning (Knowledge, skills and attitude change)

Objective 3: By 27th November 2014, 90% of all family medicine residents who have attended the programme will show an improvement of the score in the post-program assessment compared to pre-program assessment by a minimum of 10%.

This evaluation tool that was used to evaluate this objective was the Pre and Post-programme questionnaires (Appendix 6). The response rate to the pre-programme questionnaire was 100% (39 out of 39 residents). The response rate to the post-programme questionnaire was 77% (30 out of 39 residents). The total mean average score pre-programme was 49.4% and post-programme 59.3%. The overall improvement in post-programme scores compared to pre-programme scores was 9.8% (P-value <0.001). In PGY1 Group, the mean average score pre-programme was 46% and post-programme 64.6%. This group showed the main improvement, which was 18.6% (P-value <0.001). However, in PGY2 Group the mean average

score pre-programme was 55.8% and post-programme 62.5%. The improvement was 6.6% (P-value 0.118). In PGY3 Group, the mean average score pre-programme was 45.1% and post-programme 52.1%. The improvement was 7% (P-value 0.239). In PGY4 Group, the mean average score pre-programme was 56.8% and post-programme 58%. The improvement was 1.2% (P-value 0.776). Table 4 depicts the comparison of mean average scores pre & post programme. It is further illustrated in Figure 11. Females showed better improvement rates than males as depicted in table 5.

	Pre-programme	Post-Programme	Difference in the mean (95% CI)	P-Value
Mean Average score (Total)	49.5 ± 12.4	59.3 ± 9.96	9.8 (4.6, 14.9)	<0.001
Mean Average score (PGY1)	46 ± 10.9	64.6 ± 4.4	18.6 (9.7,27.4)	<0.001
Mean Average score (PGY2)	55.8 ± 13.2	62.5 ± 6.5	6.6 (2.4,15.7)	0.118
Mean Average score (PGY3)	45.1 ± 14.4	52.1 ± 13.6	7.0(5.7,19.7)	0.239
Mean Average score (PGY4)	56.8 ± 4.08	58 ± 6.7	1.2 (9.8,12.2)	0.776

Table 4: Comparison of Mean average scores pre and post-programme

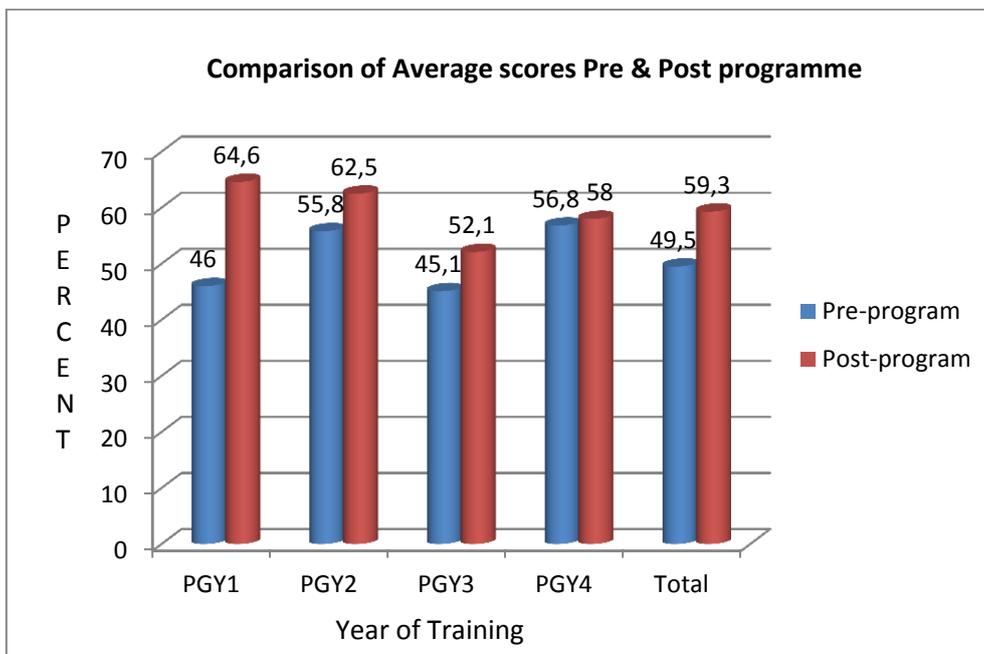


Figure 11: Comparison of mean average scores pre and post-programme

	Pre-programme	Post-Programme	Difference in the mean (95% CI)	P-Value
Mean Average score (Male)	51.2 ± 13.6	56.6 ± 11	5.4(8.4,9.7)	0.885
Mean Average score (Female)	50.6 ± 12.1	63.3 ± 6.6	12.7 (0.628,13.9)	0.072

Table 5: Comparison of average scores pre and post-programme by Gender

The pre-programme questionnaire included part of self-assessment of skills and attitudes. The answers included rating of skills as poor, good, very good or excellent. The ratings were then converted to numeric for the purpose of data analysis. The skills that were self-assessed as covered in the programme were; writing objectives, time management, communication skills, managing conflict, risk management and customer service. Overall there was an improvement in skills in the post compared to pre-programme. The main improvement was in writing objectives and time management skills (P-value <0.001). Assessment of attitudes was done through self-assessment of confidence to make a change and improve health care at local settings. There was an overall improvement in confidence, mainly in PGY3 Group. Table 6 depicts the Comparison of pre and post programme self-assessment of Skills and Attitudes (Total). Appendix (8) shows the Comparison of pre and post programme self-assessment of Skills and Attitudes in PGY1, PGY2, PGY3, and PGY4.

	Pre-program	Post-Program	Difference in the mean (95% CI)	P-Value
Writing Objectives	2.89 ± .867	3.91 ± .702	1.02(.746, 1.31)	<0.001
Time Management	2.74± 1.12	3.51 ± .981	.771 (.417, 1.126)	<0.001
Communication skills	3.94 ± .968	4.34 (+/- .639	.400 (.054, .746)	0.025
Managing Conflict	3.29 ± .987	3.66 ± .765	.371(.011, .754)	0.057
Risk Management	3.43 ± .778	3.77 ± .646	.343(.032, .654)	0.032
Costumer service	3.60 ± .914	4.00± .8.4	.400(.075, .725)	0.017
Confidence	2.80 ± .868	3.14 ± .692	.343(.080, .606)	0.012

Table 6: Comparison of pre and post-program self-assessment of Skills and Attitudes (Total)

Level 3. Behavior change

Objective 4: By 31st December 2014, 90% of all family medicine residents who have attended the programme will demonstrate improvement in professionalism and communication skills in Faculty Evaluation.

The evaluation tool that was used to evaluate this objective was the Formative assessment of residents by faculty pre and post-programme. The response rate of Formative assessment by faculty pre-programme was 79% (31 out of 39 residents) and post-programme 80% (32 out of 39 residents). Overall there was an improvement in the post compared to pre-programme evaluation results (Table 7). In the Professionalism domain, there was a significant improvement in responding to feedback more than other elements (P-value 0.070). Communication skills showed significant improvement (P-value 0.043). In the PBLI Domain, there was a significant improvement in setting learning and improvement goals more than other elements (P-value 0.096). In SBP, there was a significant improvement in the effective use of hospital resources and coordination of patient care (P-vale <0.001).

	Pre-programme	Post-Programme	Difference in the mean (95% CI)	P-Value
Professionalism (Mean Total)	11.7 ± 3.1	12.7 ± 2.1	1.00 (0.25,2.15)	0.112
Demonstrates compassion and respect	2.10 ± .61	2.24 ± .51	.138 (.10, .38)	0.255
Responds to feedback	1.83 ± .60	2.07 ± .53	.241 (.02, .50)	0.070
Is responsive to patient needs	1.96 ± .57	2.07 ± .46	.107 (.137, .351)	0.375
Respects patient privacy and Autonomy	2.07 ± .65	2.17 ± .60	.103(.190, .397)	0.477
Accountable to patients, society and the profession	1.89 ± .62	2.04 ± .42	.143(.086, .372)	0.212
Respect time	2.00 ± .70	2.10 ± .61)	.103(.153, .360)	0.415
Communication skills (Total)	3.92 ± 1.0	4.38 ± .98)	.461(.015, .907)	0.043
Communicates effectively with patients	2.00 ± .59	2.24 ± .57)	.241(.022, .461)	0.032
Communicates effectively with Health care team	1.92 ± .56	2.19 ± .56)	.269(.045, .583)	0.090
PBL (Total)	6.8 ± 1.8	7.6 ± 1.4)	.833(.403, 2.06)	0.166
Identifies Strength and Deficiencies in Knowledge, skills	1.62 ± .62	1.85 ± .45)	.185(.084, .455)	0.170
Sets Learning and improvement Goals	1.67 ± .55	1.85 ± .45)	.185(.035, .406)	0.096
Systematically analyze using Quality improvement methods	1.58 ± .51	1.83 ± .57	.250(.145, .645)	0.191
Incorporates formative assessment in practice	1.64 ± .63	1.88 ± .60	.240(.059, .539)	0.110
SBP (Total)	7.5 ± 2.5	9.00 ± 2.5	1.50(.86, 3.86)	0.165
Effectively uses Hospital resources	1.65 ± .48	2.04 ± .20	.391(.176, .607)	<0.001
Coordinates patient care	1.44 ± .50	2.00 ± .40	.560(.560, .769)	<0.001
Considers Cost and Cost-benefit	1.53 ± .61	1.74 ± .56	.211(.093, .514)	0.163
Advocate of Quality patient care and system	1.53 ± .51	1.84 ± .50	.316(.045, .677)	0.083
Participate in identifying system errors and implementing solutions	1.29 ± .48	1.57 ± .53	.286(.166, .737)	0.172

Table 7: Comparison of pre and post-program formative assessment form from different parameters

Level 4: Change in the organizational context among participants, learners and patients

Objective 5: By 31st December 2014, 90% of all family medicine residents who have attended the program will achieve a minimum of 80% of agreement on general satisfaction and professionalism dimensions in post-programme patient satisfaction questionnaire.

The evaluation tool that was used to evaluate this objective was patient satisfaction questionnaires pre and post-programmes which covers four main areas; overall satisfaction, professionalism, the doctor-patient relationship and time (Appendix 3). The response rate to patient satisfaction questionnaire pre-programme was 80% (32 out of 39) and post-programme 20% (8 out of 39). It was difficult to compare the pre and post programme data due to the low response rate of post programme. The Receptionist sent an SMS and phone call reminders for appointments in two attempts if the patient does not show in appointment then the patient was labelled as no response.

In an attempt to investigate the reasons behind low response rate post programme, the author tried to analyze patient demographics. 26 patients of those who responded gave a full answer of their demographics. Females were the majority of the patient population as depicted in Figure 12. 38.3% were 30-39-year-old, followed by 19.2% were 40-49-year-old (Figure 13). In relation to the visit type, 65% were a first time and 35% follow-up (Figure 14).

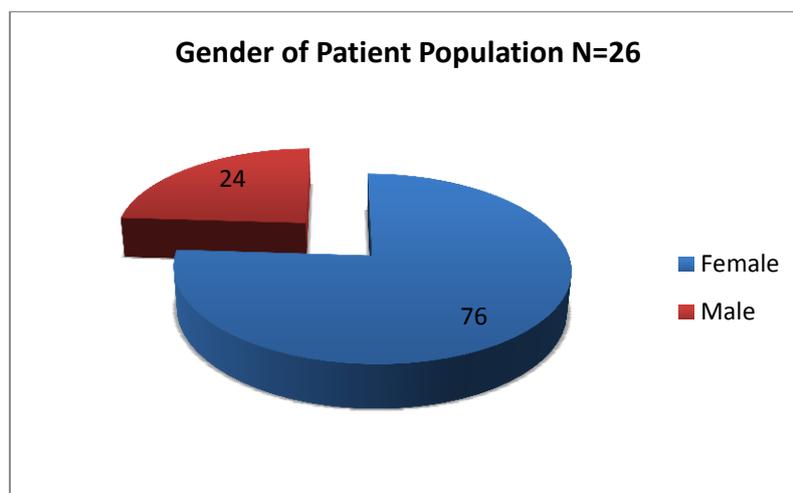


Figure 12: Gender of patient population

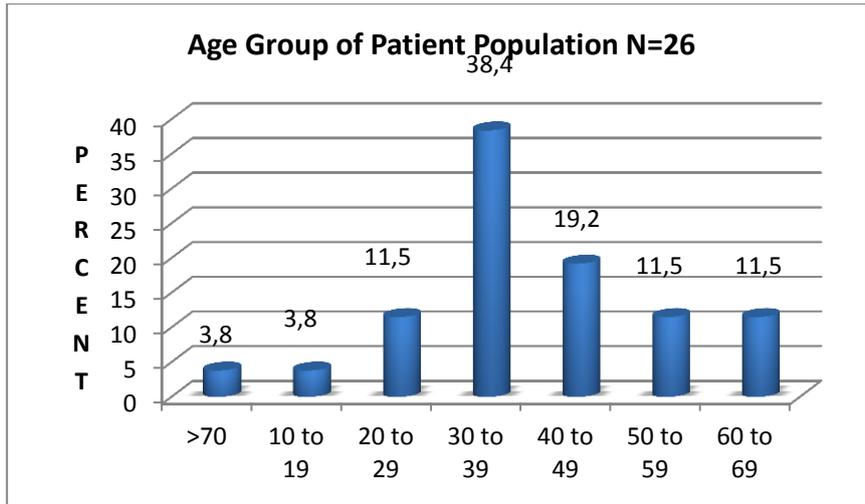


Figure 13: Age group of patient population

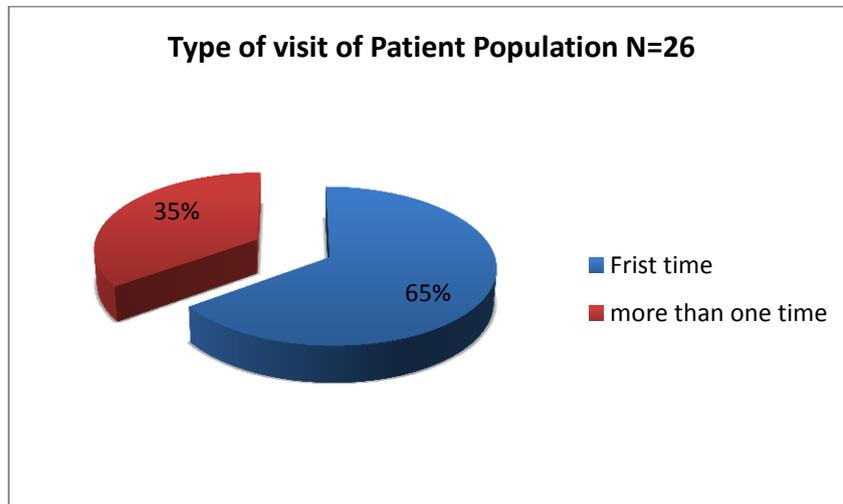


Figure 14: Type of visit of patient population

The Data from the eight respondents to post-programme questionnaires were analyzed in cross-tabulation (Appendix 9). From these tables, we understand that total satisfaction rate was the same pre and post-program (37.5% agree, 62.5% strongly agree). As a measure of Professionalism “This doctor was very careful to check everything when examining me”, the percentage of those who strongly agree increased post- programme (25% pre and 50% post). In the measure of Doctor-patient relationship, the question of “The Doctor was interested in me as a person, not just illness” and Satisfaction with time “The time I was able to spend with the doctor was a bit too short” there was no significant change from pre to post-programme data. Once again, due to the small number of respondents, it is difficult to generalize the findings.

4.4.4 Dissemination Plan

Given the Positive Reaction to the programme and improvement rates in knowledge, skills and attitudes, the writer has strong evidence by evaluation for the success of the programme that can be discussed with stakeholders. The Programme director showed her initial acceptance and impression from the feedback she received. This programme is planned to be an integral part of the curriculum to be taught yearly to the new joining residents. Assessment of more senior residents will be done periodically, and similar programmes will be arranged according to their needs.

4.5 Conclusion

The Evaluation model used by the author was Kirkpatrick's four-level model to evaluate the implementation of Professional Development Programme for Residents. The main rationale for choosing the model was its clarity, simplicity and its focus on programme outcomes. The evaluation aimed at measuring the effectiveness of the programme using the four levels of Kirkpatrick's by comparing pre and post programme data. 97.5% of Family Medicine residents have attended the programme and gave a positive reaction to the content of the programme. There was an improvement in residents' knowledge, skills and attitudes in the post-programme compared to the pre-programme. The behavioural change was evaluated by Comparing faculty assessment of residents in the areas of professionalism, communication skills, PBL and SBP pre and post programme, it showed significant improvement in some areas. In the Following chapter, the author will discuss the results and propose future recommendations.

Chapter 5: Discussion and Conclusions

5.1 Introduction

This Organizational Development project centers on the implementation of a professional development program for Family Medicine residents in Primary Health Care Corporation. The main aim of the project was to equip family medicine residents with the managerial, legal and communication skills that are needed to optimize their chances to deliver high quality services to the wider community. This chapter provides a discussion of the impact of the change project. In the Academic context, the focus is not on the success or failure of the project, but on the lessons learned, how the project was managed, and the recommendations for future research (Coughlan & Casey, 2000). Strengths and limitations of the project will be outlined, and the recommendations for future improvements will be provided. The chapter ends with a summary and conclusion, providing focus on the key points raised in the discussion.

5.2 Project Impact

The implementation of this project was envisioned to contribute to the 'vision and goals' of the organization. PHCC strategy was launched, particularly the goals of 'Excellence in Workforce' and 'Excellence in organizational learning and development' (PHCC, 2013-14). For effective implementation of this strategy, all health care staff and especially new physicians in training (Residents) need to be aware of the evolving organizational, managerial and legal issues and the enabling communication skills to face the ever-growing complexities in the practice of medicine. The change initiative was established to meet those requirements and in this respect the project aim was achieved.

The structured five-day program developed was consistent with the ACGME-I accreditation requirements (ACGME-I, 2011), and the learning outcomes were directly linked to residents' needs. The use of Senior & Swailes OD model (Senior & Swailes, 2010) facilitated the implementation of the project with strong emphasis on innovation, leadership and communication. The project results show an improvement in residents' knowledge and skills post-programme compared to pre-programme

figures, in the areas tested. Residents now feel more confident and believe they are more competent to provide high-quality services to the wider community. One of the key components of the Family Medicine Accreditation requirements, i.e. providing 20 hours of the total 100 hours training in the management of health systems over the course of residency was achieved, although a follow-up assessment of the same cohort of trainees who participated in the study e.g. in another 12 months would ascertain whether in practice, new skills and competencies learned on health systems management are sustained or not.

One of the short-term outcomes of the project was the good attendance rate (97%) among residents who also showed a very good reaction to the programme. Improvement in residents' knowledge from baseline was statistically significant for the whole, as well as PGY1 group (P-value < 0.001). It was less prominent in the other PGY levels with the least improvement was PGY4 group 1.2%. This result seems to suggest that implementing the programme earlier in the Residency programme might be more advantageous and provides better initial outcomes. If such early learning is reinforced over time, hopefully it becomes better embedded in their clinical practice and serves as a useful change strategy. This notion is supported by Jones et al. (2008) who have emphasized that practice management education needs to be addressed early in the Residency programme, thus allowing residents to integrate the acquired knowledge and skills over the length of training. On the other hand, the question remains whether PGY4 Residents were already 'set in their ways' and therefore felt less inclined to 'learn' new things, having completed most of their training assessment requirements for Board Certification examination. This might provide other opportunities for targeted educational / Continuous Professional Development training for older clinicians already in practice.

There was an overall improvement in residents' self-assessment of skills, with statistically significant improvements in writing objectives and time management (P-value <0.001) from baseline. Residents assessed themselves as more confident to practice after the programme. In relation to behavioural change, analysis of formative evaluations by faculty showed improvement in professionalism, communication skills, PBLI, and SBP. Also of statistical significance was the effective use of hospital resources and coordination of patient care (P-value <0.001). Larger sample size might be required to comment on the significance of the other parameters.

The human capital is the main asset for the organization, and investing in professional development of people would enhance future organizational growth and development. This can be achieved through enhancing the culture of the organization to be a learning organization (McAulliffe & Van Vaerenbergh, 2006; Senior & Swails, 2010). Longer term studies are recommended to monitor residents' performance and competence after graduation and how well these are sustained over time. Such continuous monitoring will inform the need for continuing professional development in this area. Perhaps it would be useful to develop a Personal Development Portfolio for graduates from the postgraduate Residency Programmes to keep as part of their annual appraisal requirement to assess skills and competencies relating to training.

5.3 Strengths of the project

The strength of the project was its close alignment with National (QNV, 2030; QNDS, 2011-2016) and PHCC strategies (PHCC, 2013-14). Fulfilling the ACGME-I requirements is important for the accreditation of FMRP. Senior & Swailes OD model of change (Senior & Swailes, 2010) provided direction to the project and helped in ensuring that no important steps were missed. The evaluation of the project was undertaken using the Kirkpatrick's evaluation model (Kirkpatrick, 1996), which is widely used to evaluate educational programmes (Bates, 2004). Collaboration with a highly reputable institution, the RCSI was a great opportunity for PHCC, through the facilitation of the programme by subject matter experts. Studying residents from different PGY levels and divergent age groups gives a more thorough picture on the recommendation for future implementation.

5.4 Limitations of the project

This change project has several limitations. First, the timeline for the project was short; thus, it is not possible to comment on the long-term goals that were to optimize the residents' chances of career success. Embedding and sustainability of the

change were difficult to comment on. However, despite this, as the project impact and short-term outcomes were achieved, it gives it a credit to be sustained and implemented for the new joining residents in the coming years. Second, small sample size and single site study limit the possibility of generalisation of results. Third, while self-assessment of skills and attitudes are often used, the validity of such approach has been questioned (Byrne et al. 2012). However, Colthart et al. (2008) supported that when self-assessment is used with other types of assessment it provides a more holistic assessment of competence. The use of self-assessment with other modalities of assessments like multiple choice questionnaires, Faculty and patient evaluation wished to permit a holistic assessment of competence. Furthermore, it was important to consider if the residents were exposed to similar training in the past or not, which would further inform residents' scores. Fourth, the low show rate in post-programme appointments for patient satisfaction questionnaires might be attributed to the fact that, despite patients were given enough information about the project in the consent form, they may not have the required buy-in as important stakeholders. Short-term wins might be a good strategy for these patients. Short-term wins might be in the form of easier access to the clinic and respecting their identity by exploring that the piece of information that they will provide has a high impact on the evaluation of the programme. Additionally, the group evaluated were middle aged and females, related to the culture, they might be involved in work or household issues that rendered them from attending their appointments.

5.5 Recommendations

Giving an appointment for filling the questionnaires is not a very feasible idea. Asking about the level of education and sending the questionnaires to the patients through other modalities like emails might improve the rate of the returned questionnaires. Longer-term studies are recommended to comment on residents' performance and competence after graduation, which will inform their need for continuous professional development in this area. This might be in the form of surveys to be sent to residents after graduation to assess their competency in the same area studied. Medium to

long term sustainability might also be assessed by means of monitoring e.g. through a Personal Development Portfolio to be kept by residents who complete the training, and assessed annually as part of their performance evaluation or appraisal.

Since the major improvement was in the PGY1 group, it makes them the most appropriate recommended group to implement the program in subsequent years to embed this aspect of practice early on. Their willingness to participate and learn might be attributed to the lack of basic knowledge in the management of health systems and a high level of enthusiasm, and it will allow residents to integrate the acquired knowledge and skills over the length of training. There might be different strategies to inculcate this philosophy and 'refresh' knowledge, skills, attitudes and competencies in organizational / systems management, leadership and effective communication among practising physicians, who nonetheless still need to undertake refresher courses to sustain their organizational management and communication skills as part of health service quality improvement.

5.6 Learning about Organizational Development

The exploration of the different OD models had increased the writer's insights about the implementation of change initiatives. The implementation of Senior & Swails OD model (Senior & Swailes, 2010) had provided a structured process for the implementation of the project. What we need is a transformational change for our organizations to continuously learn, adapt and improve (McAulliffe & Van Vaerenbergh, 2006). Transformational leadership have been recognized for the success of change initiatives by transforming a vision into objectives and help the followers to change their behaviours and helping them to identify their full potential (Coghlan and McAulliffe, 2003). Change agents need to be aware of methods of changing the strategies to take account of the culture (Senior & Swailes, 2010). Leaders need to balance long-term and short-term goals, they need to be visionary and pragmatic at the same time, and they need to be able to see the big picture and pay attention to global and local issues. Furthermore, leaders need to encourage individual accountability, as well as teamwork (McAulliffe & Van Vaerenbergh, 2006).

5.7 Summary and Conclusion

This project involved the implementation and evaluation of a professional development programme for family medicine residents in PHCC. The project was facilitated through Senior & Swailes OD model of change and Kirkpatrick's model of evaluation. The evaluation showed that there was an improvement in residents' knowledge and skills. The aim of the project was achieved as prioritized and recognized by accreditation requirements. Longer studies are needed to be able to comment on the sustainability of residents' performance after graduation and the need for continuous professional development in the mentioned subject. In this rapidly evolving world, what we need is transformational leaders, which would enhance the transformation of our organizations to learning organizations, as the only way to survive and flourish.

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Appendices

Appendix 1. Overview of Qatar Education and Training Sector Strategy Achievements. (*Education and Training Sector Strategy, 2011-2016*)



Appendix 2. Professional Development Programme for Residents in PHCC Programme Timetable

Professional Development Programme for Residents in PHCC Programme Timetable

Day One: Professionalism & Managing Yourself	
Learning Outcomes for Residents	<ul style="list-style-type: none"> • Discuss what professionalism is and the importance of competence. • Write personal & professional development objectives that will increase their effectiveness and efficiency • Implement good time management skills in their daily work. • Explain why emotional intelligence is important for residents
Time	Topic
7.45	Registration
8.00	Introductions and expectations
8.30	The role of the Resident in modern medicine and the importance of professionalism.
9.15	Understanding the domains of competence for Residents Completing a personal SWOT analysis, and action plan
10.00	Break 15 minutes
10.15	Writing and agreeing work and training objectives Developing your professional competence plan & training needs
11.15	Why doctors need high levels of Emotional Intelligence
12.15	Lunch 30 minutes
1.00	Principles of time management, prioritization, balanced live style
2.00	Finish
Presenters	Mr Dermot O'Flynn & Mr Brendan Colclough

Professional Development Programme for Residents in PHCC Programme Timetable

Day Two: Working With Your Team, Colleagues & Patients	
Learning Outcomes for Residents	<ul style="list-style-type: none"> Explain team dynamics and how teams can deliver a quality healthcare service. Apply their team role and explain how this affects their behaviour in a team. Explain why conflict occurs in the work place and their natural conflict style Apply best practise in how to communicate with patients
Time	Topic
8.00	Learning review.
8.15	What makes a successful healthcare team work and why is it so important for the Primary Health Care Corporation
9.15	How can a Resident contribute to a high performance and a safe medical team?
10.00	Break 15 Minutes
10.15-	Communication skills for Residents
12.15	Lunch Break
1.00	Learning how to manage conflict situations
2.00	Close
Presenters	Mr Dermot O'Flynn & Mr Brendan Colclough

**Professional Development Programme for Residents in PHCC
Programme Timetable**

Day Three: Patient Safety, Risk Management, Quality Improvement, and Patient Safety	
Learning Outcomes for Residents.	<ul style="list-style-type: none"> Explain the importance of patient safety Discuss the concept of continuous quality improvement in healthcare Identify patient safety risks in primary care Develop a suitable continuous quality improvement project using plan –do- study -act.
Time	Topic
8.00	Learning review
8.15	Patient Safety and risk management - what Residents need to do to avoid errors in their work
10.00	Break 15 minutes
10.15-	Developing and implementing continuous quality improvement projects
12.15	Lunch
1.00	Team case study & presentation
2.00	Evaluation & close
Presenters.	Mr Dermot O'Flynn & Mr Brendan Colclough

Professional Development Programme for Residents in PHCC Programme Timetable

Day 4: Managing the Patient, Customer Satisfaction, and Financial Planning	
Learning Outcomes for Residents.	<ul style="list-style-type: none"> Discuss patients expectations when they visit a PHCC clinic Identify moments of truth for patients Complete a patient service journey in PHCC Understand why financial planning is important in healthcare delivery Explain how they will use what they have learnt to manage themselves and their patients more effectively.
Time	Topic
8.00	Learning review
8.15	What does customer service mean?
9.00	The patient's expectations and their service journey through PHCC.
10.00	Break 15 minutes
10.15-	Introduction to financial planning in a health service.
12.15	Lunch
1.00	Team presentations & learning review
2.00	Evaluation & close
Presenters.	Mr Dermot O'Flynn & Mr Brendan Colclough

**Professional Development Programme for Residents in PHCC
Programme Timetable**

Day Five: Acquiring knowledge on Management of Health Systems in PHCC		
Learning Outcomes for Residents		<ul style="list-style-type: none"> Identify current billing practices in PHCC Assessing practice staffing needs Determining PHCC value in the marketplace Identify employment laws and procedures. Explain principles of public relations and media training
Time	Presenters	Topic
08.00	Dr. Isam A. Bagi	Current Billing Practices in PHCC
09.00	Mr. Ibrahim Ali	Employment Laws and Procedures in PHCC
10.00		Break 15 minutes
10.15	Mrs. Maryam Yaseen	Principles of Public relations, Determine value of PHCC in Marketplace
11.15	Dr. Sameer Makled	Salary and Promotion Procedures in PHCC
12.15.		Lunch 45 minutes
1.00		Evaluation & Feedback
2.00		Close
Presenters		PHCC Representative

Appendix 3. Patient Satisfaction Questionnaire



Patient satisfaction form

Doctor's Name: _____

Date: _____

Gender: Male () Female ()

Age:

- 10-19 years ()
- 20-29 years ()
- 30-39 years ()
- 40-49 years ()
- 50-59 years ()
- 60-69 years ()
- 70 and above ()

How many times did you visit this doctor? First time () More than one time ()

This form contains a list of questions that ask you what you think of your visit to the doctor today. Your answers will be kept entirely confidential and will not be shown to the doctor so feel free to say what you wish.

- Please answer all the questions by placing a tick in the answer box that is closest to what you think. "Neutral" means you have no feelings either way.
- Please do not write your name on the form and be sure to place this form in the box provided before you leave today.

Please choose the option that represents your opinion.

	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
1. I am totally satisfied with my visit to this doctor					
2. This doctor was very careful to check everything when examining me					
3. I will follow this doctor's advice because I think he/she is absolutely right					
4. This doctor told me everything about my treatment					
5. This doctor examined me very thoroughly					
6. This doctor was interested in me as a person not just my illness					
7. I understand my illness much better after seeing this doctor					
8. There are some things this doctor does not know about me					
9. I would find it difficult to tell this doctor about some private things					
10. The time I was able to spend with the doctor was a bit too short					
11. I wish it had been possible to spend a little longer with the doctor					
12. I am not completely satisfied with my visit to the doctor					

Comments:

.....

.....

.....

Thanks for your participation

Appendix 4. Patient Consent form



Participant information sheet

The Implementation of a professional development program for Family Medicine residents - Primary Health Care Corporation (PHCC- Qatar) 2014

Dear Participant,

We invite you to participate in the above project the aim of which is to: to equip family medicine residents with the important knowledge and skills related to managerial, legal and communication issues.

Your participation will involve answering the patient satisfaction questionnaire given. The program questionnaire will cover your General satisfaction of the consultation and the professionalism of the doctor, and It will take you about 5 minutes to complete.

We hope to make use of the results in helping us to understand how the Primary Health care Corporation (PHCC's) Strategy is set up and how it is working. This is potentially of benefit to the PHCC and making sure to deliver High Quality care to you in the future.

This is purely voluntary and you are not obliged to take part. If you choose to take part, we will protect your identity and keep all information you provide confidential. You can also choose to withdraw from taking part at any time if you do not wish to continue.

If you need further information or clarification, please contact Dr. Noora Al Mutawa at (namalmutawa@phcc.gov.qa. or Tel. 44839607.
Thank you for your help.

Signature
Dr. Noora Al Mutawa
Consultant Family medicine

Consent

I have read and understood the information about the project I am being asked to take part in. I understand what is being asked of me and that I can ask questions and am free to withdraw from the study if I choose to.

I am satisfied with the information and agree to participate in the project

Participant Name

(Participant Signature)

Date

(Witness Signature)

Date



Appendix 5. Resident Consent Form.



Primary Health Care Corporation
Clinical Affairs
Research Section
researchsection@phcc.gov.qa

Participant Information Sheet

The Implementation of a professional development program for Family Medicine residents - Primary Health Care Corporation (PHCC- Qatar) 2014

Dear Participant,

We invite you to participate in the above project the aim of which is: to equip family medicine residents with the important knowledge and skills related to managerial, legal and communication issues. You have been invited because you are a Resident in Family medicine program, and we hope you will be able to help us gather the necessary information to help us achieve our goal.

Your participation will involve Active participation in the program. We will administer a pre & post program questionnaire which covers your reaction to the program and change in Knowledge, skills and attitudes and It will take you about 10 minutes to complete.

Although the information will be used for academic purposes, we also hope to make use of the results in helping to understand how the Primary Healthcare Corporation (PHCC's) Strategy is set up and how it is working.

This is purely voluntary, and you are not obliged to take part. If you choose to take part, we will protect your identity and keep all information you provide confidential. You can also choose to withdraw from taking part at any time if you do not wish to continue.

If you need further information or clarification, please contact Dr. Noora Al Mutawa at (namalmutawa@phcc.gov.qa) or telephone (66676000). Alternatively you may contact Ms May Khattab at (mkhattab@phcc.gov.qa) at PHCC.
Thank you for your help.

Signature
Dr. Noora Al Mutawa
Consultant Family medicine

Consent

I have read and understood the information about the project I am being asked to take part in. I understand what is being asked of me and that I can ask questions and am free to withdraw from the study if I choose to.

I am satisfied with the information and agree to participate in the project

Participant Name

(Participant Signature)

Date

(Witness Signature)

Date

Appendix 6. Pre & Post-workshop assessment Questionnaires



Family Medicine Training Program

Implementing professional development program for Family Medicine residents - Primary Health Care Corporation (PHCC- Qatar) 2014

Pre & Post workshop Questionnaires

This questionnaire was designed to determine what you already know about the workshop theme. We will ask you to complete the questionnaire again at the end of the workshop so that we can assess what you have learned and how the trainers have done at conveying the main points.

This is not a "test" and you will not be "graded" on your performance.

The questionnaire has questions about a wide variety of topics that will be covered in this workshop. You should complete all questions on your own and to the best of your ability

Instructions:

Please answer the following questions on early grade reading thematic areas. Some questions require judgment and opinion, others require clear factual knowledge. Questions vary including multiple choice, and short answer.

Demographic Data

1. Year of Training

- a) PGY1
- b) PGY2
- c) PGY3
- d) PGY4

2. Age

- a) 21-25
- b) 26-30
- c) 31-35
- d) 36-40

3. Gender

- a) Male
- b) Female

4. The Two-Digit Course ID Number Given to You at Start of Workshop: __ __

Measures of Knowledge

5. How do you rate your Knowledge in explaining why emotional intelligence is important for residents

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

6. If your answer is good or above, why do you think emotional intelligence is important for residents?

7. How do you rate your knowledge in Team Dynamics and how team can deliver a high quality service

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

8. If your answer is good or above, How would you explain Team dynamics, and how team can deliver a high quality service

9. How do you rate your knowledge in continuous quality improvement

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

10. If your answer is good or above, How would you explain the concept of continuous Quality improvement?

11. How do you rate your knowledge in Explain current billing practices in PHCC

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

12. If your answer is good or above, How would you explain current billing practices in PHCC?

13. How do you rate your knowledge in Employment Laws and procedures in PHCC?

- a) Excellent

- b) Very Good
- c) Good
- d) Fair
- e) Poor

14. If your answer is good or above, Explain what you know about Employment Laws and Procedures in PHCC

15. How do you rate your knowledge in Principles of public relations and media training

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

16. If your answer is good or above, Explain what you know about Principles of public relations and media training

Measures of Skills

17. How do you rate your skills in writing personal and professional development objectives:

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

18. How do you rate your Time management skills in your daily activities:

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

19. How do you rate your communication skills with patients and families

- a) Excellent

- b) Very Good
- c) Good
- d) Fair
- e) Poor

20. How do you rate your skills in managing conflict situations

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

21. How do you rate your skills in risk management and what to do to avoid errors in the workplace

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

22. How do you rate your skills in costumer service and costumer satisfaction

- a) Excellent
- b) Very Good
- c) Good
- d) Fair
- e) Poor

23. For which of the tasks listed above would you most like to strengthen your skills? Identify up to 5 by writing the corresponding number(s) below.

- 1.
- 2.
- 3.
- 4.
- 5.

Behaviour change

24. How confident you consider yourself to make a Change to Improve Health Care at your Local Setting

- a) Very Confident
- b) Confident
- c) Reasonably Confident
- d) Not Confident

THANK YOU FOR TAKING THE TIME TO FILL OUT THE QUESTIONNAIRE

Appendix 7. Evaluation of Course content.



Evaluation of Course Content

As a whole, this course: (check the box with the appropriate number)

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Was relevant to my needs					
Was appropriate to my level					
Provided useful feedback					
Was challenging but not threatening					

Please rate each trainer by checking the box with the appropriate number. (5=Very effective 1=Not effective)

Name of Trainer: _____

	1	2	3	4	5
Knowledge of subject					
Organization of sessions					
Obvious preparation					
Style and delivery					
Responsiveness to group					
Producing a good learning climate					

Any other comments:

Name of Trainer: _____

	1	2	3	4	5
Knowledge of subject					
Organization of sessions					
Obvious preparation					
Style and delivery					
Responsiveness to group					
Producing a good learning climate					

Any other comments:

Would you recommend others with similar needs to your own to attend this programme?

What did you like best about the programme?

What did you like least about the programme?



Please share with us any comments, thoughts, or suggestions about this course:

THANK YOU FOR TAKING THE TIME TO FILL OUT THE QUESTIONNAIRE.

Appendix 8. Comparison of pre and post programme self-assessment of Skills and Attitudes in different PGY levels.

	Pre-programme	Post-Programme	Difference in the mean (95% CI)	P-Value
Writing Objectives	2.67 ± .651	4.00 ± .603	1.33(1.02, 1.64)	<0.001
Time Management	2.58 ± .900	3.25 ± 1.138	.667 (.067, 1.40)	0.071
Communication skills	3.67 ± .985	4.25 ± .754	.583(.157, 1.32)	0.111
Managing Conflict	2.92 ± .669	3.50± 1.00	.583(.011, 1.15)	0.046
Risk Management	3.25 ± .754	3.92 ± .669	.667(.103, 1.23)	0.025
Costumer service	3.75 ± .914	4.00 ± .8.4	.250(.363, .863)	0.389
Confidence	3.08 ± .900	3.25 ± .622	.167(.364, .697)	0.504

Table 1. Comparison of pre and post program self-assessment of Skills and Attitudes (PGY1)

	Pre-programme	Post-Programme	Difference in the mean (95% CI)	P-Value
Writing Objectives	2.43 ± .787	3.57 ± .787	1.143 (.505, 1.78)	0.005
Time Management	2.71 ± .951	3.29 ± .488	.571 (.156, 1.29)	.103
Communication skills	3.71± 1.113	4.29 ± .756	.571 (.156, 1.29)	.103
Managing Conflict	3.29 ± .690	3.71 ± .535	.429 (.474, 1.331)	.289
Risk Management	3.14 ± 1.254	3.57 ± .951	.429 (.299, 1.156)	.200
Costumer service	3.29 ± .914	3.71 ± .8.4	.429 (.299, 1.156)	.200
Confidence	2.86 ± .690	3.14 ± .690	.286 (.166, .737)	.172

Table 2. Comparison of pre and post program self-assessment of Skills and Attitudes (PGY2)

	Pre-programme	Post-Programme	Difference in the mean (95% CI)	P-Value
Writing Objectives	3.09 ± .831	3.82 ± .603	.727 (.120, 1.33)	0.024
Time Management	2.82 ± 1.25	3.73 ± .786	.909 (.089, 1.729)	0.033
Communication skills	4.00 ± 1.00	4.36 ± .674	.364 (.326, 1.05)	0.267
Managing Conflict	3.64 ± .924	3.73 ± .647	.091 (.783, .964)	0.821
Risk Management	3.43 ± .809	3.77 ± .522	.091 (.611-.793)	0.779
Costumer service	3.64 ± .809	4.00 ± .632	.364 (.257, .985)	0.221
Confidence	2.45 ± .934	2.91 ± .701	.455 (.096, 1.006)	0.096

Table 3. Comparison of pre and post program self-assessment of Skills and Attitudes (PGY3)

	Pre-programme	Post-Programme	Difference in the mean (95% CI)	P-Value
Writing Objectives	3.60 ± 1.14	4.40 ± .894	.800 (.819, 2.41)	0.242
Time Management	3.00 ± 1.87	4.00 ± 1.41	1.00 (.122, 1.87)	0.034
Communication skills	4.80 ± .447	4.60 ± .548	-.200 (.839-1.23)	0.621
Managing Conflict	3.40 ± 1.51	3.80 ± .447	.400 (1.48, 2.28)	0.587
Risk Management	3.80 ± .837	4.20 ± .837	.400 (.280, 1.08)	0.178
Costumer service	3.60 ± 1.14	4.40 ± .894	.800 (.819, 2.41)	0.242
Confidence	2.80 ± .837	3.40 ± .894	.600 (.511, 1.71)	0.208

Table 4. Comparison of pre and post program self-assessment of Skills and Attitudes (PGY4)

Appendix 9. Analysis of the pre & post-programme data from the eight respondents to patient satisfaction Questionnaires.

	I'm totally satisfied with my visit (Post)			Total
I'm totally satisfied with my visit (Pre)		Agree	St. Agree	
	Agree	3 (37.5%)	0	3 (37.5%)
	St. Agree	0	5 (62.5%)	5 (62.5 %)
Total		3 (37.5%)	5 (62.5%)	8 (100%)

Table 1. Totally Satisfied_Pre * Totally Satisfied_Post Crosstabulation

	Careful in Examining (Post)			Total
Careful in Examining (Pre)		Agree	St. Agree	
	Neutral	1(12.5%)	0	1 (12.5%)
	Agree	1(12.5%)	0	1 (12.5%)
	St. Agree	2 (25%)	4 (50%)	6 (75%)
Total		4 (50%)	4 (50%)	8 (100%)

Table 2. This doctor was very careful to check everything when examining me

	Interested (Post)					Total
Interested (Pre)		Disagree	Neutral	Agree	St. Agree	
	St. Disagree	0	1 (12.5%)	0	0	1 (12.5%)
	Agree	0	0	2 (25%)	1 (12.5%)	3
	St. Agree	2 (25%)	0	0	2 (25%)	4 (50%)
Total		2 (25%)	1 (12.5%)	2 (25%)	3 (37.5%)	8 (100%)

Table 3. The Doctor was interested in me as a person not just illness Pre*Post Crosstabulation

	Time short (Post)					Total
Time short (Pre)		St.Disagree	Disagree	Neutral	Agree	
	St. Disagree	1(14%)	0	0	0	1(14%)
	Disagree	0	3 (43%)	0	0	3 (43%)
	Neutral	0	0	1(14%)	1(14%)	2(28%)
	Agree	0	0	1(14%)	0	1(14%)
Total		1(14%)	3 (43%)	2 (28%)	1(14%)	7(100%)

Table 4. The time I was able to spend with the doctor was a bit too short Pre*Post Cross tabulation

Appendix 10. Project Poster

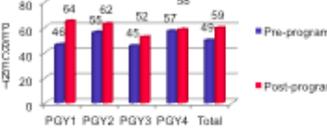


RCSI INSTITUTE OF LEADERSHIP

The Implementation of a Professional Development Programme for Family Medicine residents in the Primary Health Care Corporation Qatar

MSc in Leadership in Health Professions Education
RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

Noora Al-Mutawa: namalmutawa@phcc.gov.qa

Introduction & Background	Methodology	Evaluation																		
<p>Acquiring knowledge on Management of Health Systems is one of the Accreditation Council of Graduate Medical Education-International (ACGME-I) requirements¹. Our change initiative was introduced mainly to fulfill the non-clinical career enhancement competencies already identified and prioritized by the ACGME-I namely; professionalism, interpersonal and communication skills, practice-based learning and improvement, and system-based practice².</p> <p>Figure 1: ACGME Core Competencies</p> 	<p>The Senior & Swailes OD Model was used to underpin this change process³.</p> <p>Figure 2: OD Model</p>  <p>Present State- Future State</p> <ul style="list-style-type: none"> • Complete SWOT, Stakeholder and force field analysis to determine the forces around the change. • Develop a roadmap for the Project structure. • Develop Programme structure, objectives, and learning outcomes. <p>Gain Commitment</p> <ul style="list-style-type: none"> • Targeted one to one meetings and informal discussions to strengthen the buy-in of key stakeholders. • Engagement, Consultation and integration of stakeholders' views. <p>Develop an Action Plan</p> <p>Develop a time-framed action plan identifying the key stages, change agents and dependencies.</p> <p>Implement the Change</p> <ul style="list-style-type: none"> • Develop a Focus group. • Communicate objectives and distribute roles in line with the action plan. <p>Assess and Reinforce Change</p> <ul style="list-style-type: none"> • Evaluate the change process and disseminate results. 	<p>The Kirkpatrick's model was used for evaluation of this project⁴.</p> <p>97% of residents have attended. A questionnaire was used to assess participant's knowledge skills and attitudes pre and post-programme.</p> <p>Figure 3: Kirkpatrick's model</p>  <p>Residents agreed that the course was relevant to their needs.</p> <p>Figure 4: Comparison of Average scores Pre & Post-programme</p>  <table border="1" style="width: 100%; font-size: x-small; margin-top: 5px;"> <thead> <tr> <th>Group</th> <th>Pre-program</th> <th>Post-program</th> </tr> </thead> <tbody> <tr> <td>PGY1</td> <td>45</td> <td>64</td> </tr> <tr> <td>PGY2</td> <td>55</td> <td>62</td> </tr> <tr> <td>PGY3</td> <td>45</td> <td>52</td> </tr> <tr> <td>PGY4</td> <td>57</td> <td>58</td> </tr> <tr> <td>Total</td> <td>50</td> <td>59</td> </tr> </tbody> </table> <p>There was overall improvement in resident's knowledge. The main improvement was in PGY1 group.</p>	Group	Pre-program	Post-program	PGY1	45	64	PGY2	55	62	PGY3	45	52	PGY4	57	58	Total	50	59
Group	Pre-program	Post-program																		
PGY1	45	64																		
PGY2	55	62																		
PGY3	45	52																		
PGY4	57	58																		
Total	50	59																		
<h3 style="margin: 0;">Aim & Objectives</h3> <p>Project aim:</p> <p>To equip family medicine residents with the important knowledge and skills related to managerial, legal and communication issues.</p> <p>Project objectives:</p> <ul style="list-style-type: none"> • To develop Family medicine Resident's Professional Development Programme that is 100% consistent with ACGME-I requirements. • That 95% of residents will have attended the five-day professional development programme. • That 90% of residents who have attended the programme will show an improvement of the score in the post-program assessment compared to pre-programme assessment by a minimum of 10%. 	<h3 style="margin: 0;">References</h3> <ol style="list-style-type: none"> 1. ACGME Program Requirements for Graduate Medical Education in Family Medicine (2007). 2. Swing S. (2007). The ACGME outcome project: retrospective and prospective. Medical Teacher; 29: 645-654. 3. Senior, B. & Swales, S. (2010) Organizational Change 4th Edn. Harlow: Prentice Hall. 4. Kirkpatrick, D. (1996). Great Ideas revisited. Training and Development, 50(1), 54-59. 	<h3 style="margin: 0; background-color: #e91e63; color: white; padding: 2px;">Organisational Impact</h3> <p>Residents were equipped with the main knowledge, skills and attitudes needed to deliver high-quality services to the wider community, which is in line with PHCC vision & goals and ACGME-I requirements.</p> <h3 style="margin: 0; background-color: #e91e63; color: white; padding: 2px;">Conclusion</h3> <p>The professional development programme for residents was successfully developed and implemented. It resulted in improvement in residents knowledge skills and attitudes. A longer study on whether the effects of the programme on resident's performance is sustained after residency is required.</p>																		