



## ESTABLISHMENT A DIABETES FELLOWSHIP PROGRAM FOR GRADUATED FAMILY PHYSICIANS, AT DIABETES CENTER, MILITARY HOSPITALS, TAIF SAUDI ARABIA

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### ABSTRACT

Establishment a Diabetes Fellowship Program at the Diabetes Center for graduated Family Physician can participate in improving proficiency of graduated Family Physician and activate scientific research area. Moreover, Family Physicians will be more competent and having a good experience in dealing with the management of patients with diabetes and ways of prevention. To identify the importance of establishing Diabetes Fellowship Program for Graduated Family Physician, to give a detailed description of this program and to determine the goals to be achieved at the end of this program. Review subject from different directions that related to study the general, specific and financial situational analysis of establishing a Diabetes Fellowship Program for Graduated Family Physician. Moreover, the discussion of the reasons behind the choice of this important topic, place and target population. In addition to discuss organization and evidence supporting of establishing Diabetes Fellowship Program for Graduated Family Physician. The Diabetes Fellowship Program can create a competent and qualified Family Physician that can provide comprehensive and continuous care for diabetes patients and their families including, screening, diagnosis, treatment and prevention. Furthermore, it can reduce the cost of diabetes management and related complications. The Diabetes Fellowship Program can reduce referral rates and waiting list in Endocrinology clinics, and make Family Physicians take care and involved in the management of more than 90% of diabetes cases. Moreover, Family Physicians will be able to manage patients with diabetes, according to new guidelines and the best evidence.

**KEYWORDS:** Diabetes, Fellowship, Program, Family Physician.

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### INTRODUCTION

Diabetes is a significant health problem in all parts of the world and need special attention, appropriate prevention and management programs. Moreover, Family Physicians are the best health care provider that can provide comprehensive and continuous care for patients with diabetes and can participate in prevention and promotion programs.

Establishment a Diabetes Fellowship Program at the Diabetes Center for graduated Family Physician can participate in improving proficiency of graduated Family Physician and activate scientific research area. Moreover, Family Physicians will be more competent and having a good experience in dealing with the management of patients with diabetes and ways of prevention.

Awareness of the highest authorities in the country and in various health sectors along with the high cost of treating diabetes and treating its complications encouraged to move forward in such programs and help to make it successful.

### GENERAL GOALS

Establishment a Diabetes Fellowship Program for Graduated Family Physicians, at Diabetes Center, Military Hospitals, Taif Saudi Arabia.

### LEARNING OBJECTIVES

- To identify the importance of establishing Diabetes Fellowship Program for Graduated Family Physician.
- To give a detailed description of this program.
- To determine the goals to be achieved at the end of this program.

### SITUATIONAL ANALYSIS

#### A- GENERAL

KSA (The Kingdom of Saudi Arabia) is located in the Middle East, which is the second largest Arab country



[1]. A population of about 24, 700000 with 13 provinces [2].The Taif city located in the Western Region of Saudi Arabia with four Military Hospitals. Moreover, Diabetes Center at a Military Hospital have more than 5,000 patients with diabetes registered.

### **B- DIABETES CENTER**

Most of the cases seen in the Diabetes Center is DM2 approximately 90%, followed by DM1 and gestational diabetes and other types of diabetes.

Diabetes Center has excellent facilities and new medications such as insulin pens and insulin pumps. Moreover, there are BMD (Bone Mass Density) Machine and well-equipped general and foot clinics. In addition, Diabetes Team (Physician, Diabetes Educator, Dietitian, Social Worker) provide excellent and integrated role in education, treatment and follow up of patients with diabetes.

There are no Diabetes Center at other sectors such as MOH (Ministry of Health) and private sector, and no Diabetes Fellowship Program at Taif city. Moreover, only two Diabetes Fellowship Program present in Saudi Arabia, as we will see later on.

Head of Diabetes center following Military Hospitals in its administration and resources. Moreover, head the Diabetes Center followed to the head of the Military Hospital, and head of the Military Hospital reported to a higher authority in the MSD (Medical services of the armed forces).

Diabetes center has nine clinics (three Adult Diabetic Clinics, one Pediatric Diabetic Clinics, two Diabetes Educators Clinics, one dietitian Clinic, one Social Worker clinic and one Diabetic foot Clinic). Moreover, there are a limited number of diabetes Specialist and Endocrinologists (Two Adult Endocrinologist, one Pediatric Endocrinologist, 4 diabetes specialist, 2 family physicians).

### **C- FINANCIAL ANALYSIS**

Diabetes Center is the government sector and provides free services to military patients and their families. All program fees will go to the military hospital and the people who participate in the training will have Incentives to be trained.

### **WHY DIABETES?**

Diabetes is a serious complicated disease that affects various organs in the human being starting from the head and ending by the toes. Diabetes is a worldwide problem, according to the international statistics the numbers of affected population is increase dramatically. According to IDF (International Diabetes Federation), the prevalence of diabetes in 2011 was 366 million and it will reach to 552 million in 2030. Moreover, five out of ten countries that have the highest prevalence of diabetes in the world are from gulf countries, IDF consider there is a global diabetes epidemic [3]. In KSA a famous study done

between 1995 and 2000 at the of age 30 to 70 years shows that, the prevalence of DM2 in adult is 23.7% and it was found on a lot of cases to be missed [4]. Moreover, the prevalence of DM1 in KSA children and adolescents is 109.5 per 100,000 [5].

In KSA, diabetes is cost approximately 8 billion US Dollar every year for the treatment. Moreover, it cost about 1300 US Dollar every year for treatment of one patient if there are no complications. If diabetic patient developed renal failure as a common complication of diabetes, he will cost between 27000 and 48000 US Dollar per year for the dialysis [6].

### **WHY GRADUATED FAMILY PHYSICIANS?**

Family Physicians are the gatekeeper of the health care system and they must have an excellent training particularly for common diseases such as diabetes. As we have noted many Family Physicians receives weak training for diabetes through the family medicine program. Moreover, many Family Physicians do not have good control of their diabetes patients, do not have a clear guideline in their mind for the management of diabetes, and used to treat simple cases and refer others, along with shortage of Diabetic Specialist in KSA.

This program will take part in overcoming this problem and make more efficient Family Physician. Furthermore, it can help Family Physician in early diagnosis of cases, give the appropriate diabetes management and apply the best prevention programs and future plans [7].

### **WHY DIABETES CENTER?**

Diabetes Center is a good place for training and the establishment of a Diabetes Fellowship Program, because of its facilities and the type of patients treated there. Moreover, it's a new center newly opened in 2010, with good support from a higher authority. Furthermore, Diabetes Center participating in the training of medical students the best ways of diabetes management and prevention.

The diabetes team at the Diabetes Center (Physician, Diabetes Educator, Dietitian, Social Worker),helps in the success of the training at the Diabetes Center and encouraged to work as a team.

### **WHY DIABETES FELLOWSHIP PROGRAM?**

There are only two Diabetes Program in the Kingdom of Saudi Arabia for a Family Physicians; first found in Riyadh, followed to the King Saud University, and the second in Jeddah, followed to the National Guard Hospital. Moreover, there is limited seats, only 2-3Family Physicians are accepted in each center annually. Furthermore, there is no program for diabetes in Military Hospitals across the country.

### **PROGRAM ORGANIZATION A- LEARNERS**



Graduating Family Physicians who successfully pass a Family Medicine Program (written and clinical exam).

Local committee of course director and instructors will participate to select the fellows (two fellows will be accepted each year).

Selection of fellows in the Diabetes Fellowship Program consists of two parts MCQ exam to assess their knowledge and oral examination to assess their approaches.

## **B- INSTRUCTORS**

### **In Diabetes Center**

- 1- Director of Diabetes Fellowship Program.
- 2- One Adult Endocrinologist.
- 3- One Pediatric Endocrinologist.
- 4- Three Diabetes Specialist.

## **C- Duration**

One year (12 months).

## **D- PLACE**

Diabetes Center, Military Hospital, Taif, KSA.

## **E- TRAINING PLACES**

### **1- Outpatient Clinics**

1-DiabetesCenter (Adult Diabetes Clinics, Pediatric Diabetes Clinics, Gestational Diabetes Clinics, IIT(Intensive Insulin Therapy) Clinic, Insulin Pump Clinic, Ophthalmology Clinic, Andrology Clinic, Diabetes Educators Clinic, Dietitian Clinic, Social Worker, psychologist Clinic and Diabetes foot Clinic).

- 2- Cardiology Center.
- 3- Nephrology Clinics.

### **2- Inpatient Ward**

Endocrinology/ Diabetes ward in the hospital.

### **3- Elective:**

According to the opinion of fellows.

## **F- TIME**

The fellows will start the program in the months of September each year.

## **G- COST**

10,000 USD/ year.

## **H-ADMINISTRATIVE ISSUE**

Approval will be taken from administration of Military Hospital and from Saudi Commission for Health Specialist (SCHS). Two secretary to coordinate schedules and educational activities of fellows.

## **I- TRAINING APPROACH AND EVALUATION**

The program capacity will increase gradually with time according to space availability and acceptance of the program by administration and different departments that actively participating in the training. The fellows will go through the various department according to their schedule

and a continuous evaluation will be done. At the end of the program, the certificate will be given to fellows who meeting the requirements and completion of the training.

## **J- EDUCATIONAL ACTIVITIES**

Fellows will have to do two major presentation, two journal club, two case presentation and one research project. Attending related international courses and conferences.

## **THE EVIDENCE**

"East Carolina University implemented a 1-year fellowship in diabetes. The objective of the fellowship is to educate primary care physicians to serve as regional specialists in diabetes. The program is administered by physicians, educators, and representatives of the university's affiliated teaching hospital. The curriculum includes clinical, didactic, and experiential learning strategies in outpatient and inpatient settings. Adult and pediatric endocrinologists, obstetricians, and generalists mentor and evaluate the fellows"(7).

This study concluded that, "Mean glycemic control in fellows' patients improved and other clinical endpoints were also met"(7). Additionally, "A 1-year diabetes fellowship is a replicable solution to address the need for diabetes care specialists"(7).

## **DIABETES TEAM**

Adult Endocrinologist, Pediatric Endocrinologist, Diabetes specialist, Diabetic Educators, Dietitian, Social Worker and Diabetes foot specialist.

## **GOALS TO BE ACHIEVED AT THE END OF THIS PROGRAM**

### **A- SHORT TERM GOALS**

- 1- Create a competent and qualified Family Physician that can provide comprehensive and continuous care for diabetes patients and their families including; screening, diagnosis, treatment and prevention.
- 2- Reduce referral rates and waiting list in Endocrinology clinics, and make Family Physicians take care and involved in the management of more than 90% of diabetes cases.
- 3- Family Physicians be able to refer diabetic patients in a timely manner to the right doctor.
- 4- Family Physicians be able to manage patients with diabetes, according to new guidelines and the best evidence.
- 5- Recruitment Family Physicians who have graduated from Diabetes Fellowship Program at the Diabetes Center, because it requires a lot of diabetes specialist.

### **B- LONG TERM GOALS**

- 1- Make this center a nucleus for Diabetes Programs for family physicians in other Military Hospitals in the country and even in other health care sectors.



- 2 - Reduce the cost of diabetes management and related complications.
- 3- Participate in prevention programs and minimize the prevalence of diabetes.
- 4- Establishment of a research center for the study of diabetes and related conditions at Military Hospitals.

### CHALLENGES

**There are many challenges that can resist this program, which can be divided into 4 main factors**

**A- Patients:** Patients prefer to be seen by the endocrinologist instead of Family Physicians, because they think they have a good experience and better management than Family Physicians.

**B- Family Physicians:** Conflict on family physician with special interest, because many Family Physicians do not accept to be a specialist in one area and think it is not the goals of the Family Medicine Physicians.

**C- Endocrinologist:** Competition from Endocrinologist to bear responsibility of the program or refused to participate in the training because they may believe that, Family Physicians will take some of their responsibilities or they are not qualified to treat difficult cases of diabetes.

**D- Diabetes Specialist:** because a limited number of diabetes specialist and plenty number of patients the training may be affected.

### RECOMMENDATIONS

**Recommendation to overcome challenges, improve the performance of the program and to encourage others to participate in it**

- 1- Recruitment more Diabetes Specialist and Endocrinologists at the Diabetes Center.
- 2- Give Endocrinologist and the Diabetes Specialist the opportunity to actively participate in the training and make them an integral part of the Diabetes Fellowship Program.
- 3- Send detailed semi-annual report to the head of the Military Hospital explains the achievements and benefits of this program in addition to the requirements that may improve the performance of the program.
- 4- Make an orientation program for family medicine department, graduated Family Physician and those who will participate in training about the objectives and goals of this program.
- 5- Give the opportunity to those who will finish a Diabetes Fellowship Program to recruit at the Diabetes Center.
- 6- Increase the number of trainees in the Diabetes Fellowship Program gradually according to the progress and improve resources of the Diabetes Fellowship Program and Diabetes Center and according to acceptability of the program by the Military Hospital administration and a higher authority.
- 7 - Give an incentive to those who are involved in training and give them less clinics, to give them time for training and education.

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