



جامعة الجميع الذكية  
EVERYONE'S SMART UNIVERSITY

## Everyone's Smart University

### Project (Spring 2021)

|              |                          |                    |               |
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Section

Master

Date

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Course Code

(PMG510)

## Project Risk Management

### Instructions:

- آخر موعد للتسليم هو يوم السبت 2021-05-08 في تمام الساعة ٩ مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الانجليزية.
- يتم تسليم المشروع في صيغة ملف pdf مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.
- يجب مراعاة أقسام البحث الرئيسية (مقدمة Introduction، دراسات علمية سابقة Literature Review، طريقة البحث Methodology، النتائج والمناقشة Results and Discussion، وأخيراً المراجع References. وان كان هناك ملحقات Appendices يتم إضافتها)
- يجب الالتزام بـ Theme موحد كما يلي:
- حجم الخط 12.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر line spacing 1.5
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: Eng. Mosaab M. Hamed

## **Risk Management in the Obesity Surgery Center Project**

### **Introduction:**

Obesity is one of the leading causes of preventable deaths in Saudi Arabia aside from being link to risk factors for illnesses such as diabetes, hypertension and cardiovascular diseases. However, only few healthcare institutions in the region are available to address the needs of obese patients. Also, the level of awareness for this health condition is not high and educational materials are limited. The lifestyle of its people also contributes to the obesity rate. Given the increasing demand for this healthcare intervention, we propose the Obesity Surgery Center (OSC) as a solution to the above mentioned problems.

### **Project Objective:**

To have a fully operational OSC with modern facilities to serve all obesity customer healthcare needs.

### **Purpose of Risk Management in the OSC Project**

As a Project Manager it is very important to identify and effectively manage risk, and anticipate possible risk events to prepare and take appropriate actions when risk occurs. Doing these steps eliminate or mitigate negative impacts on the OSC project. Also, the practical application of project risk management positively influences the project outcomes since risk can affect the people, processes, technology and resources involved in a project.

### **Literature Review**

Studies reveal that seven out of 10 Saudis are suffering from obesity and 37 percent of Saudi women are facing problems related to overweight. As per statistics, nearly 60 percent of the population aged over 16 in the kingdom is overweight (*3<sup>rd</sup> International Obesity Conference held in 2014*).

Project Management Institute PMI® in the PMBOK® Guide – Fourth Edition defines Risk Management as processes concerned with conducting identification of risks, analysis of impact (evaluation), responses (mitigation process), and monitoring &

control of risks. Project Risk Management as integrant part of management aims to increase the probability and impact of positive events, and decrease the probability and impact of negative events in the project.

The shortage of programs in community and home settings limits our understanding of the effectiveness of interventions in this region, while the lack of investment indicates an opportunity to develop more population-focused interventions. The evidence reviewed indicates that current programs lead to short-term improvements in outcomes relating to obesity and chronic disease prevention with no adverse effects noted. These highlight the need for action to focus more on obesity in Saudi Arabia

### **Methodology**

The project utilizes different approaches and techniques ranging from 8RS and 4TS to identify risk probabilities, Risk Matrix, and assess its impact. It also required the use of flowchart brain-storming and multi-voting techniques. Checklist was used for data collection. Expected monetary value (EMV), tables and Action Plan were developed for more detailed presentation of the project.

### **Identify Potential Risks:**

The purpose of risk identification is to minimize negative impact of project glitches and threats and to maximize the positive impact of the project opportunities. A list of risk sources was considered in identifying risks such as Safety Hazard, Surgical Complications, Compliance with Regulations, Satisfaction of Patient Needs, Patient Complaints, Competition from other Obesity Centers, New regulation in insurance payment schemes, Evolving technology in medical equipment.

**Risks Breakdown. Identify the risk priorities and ensure that appropriate attention is paid to emerging risks.**

From this list of risks, we selected a priority group using *multi-voting technique* and categorized them using *brain storming techniques*.

**Perform qualitative risk analysis (Probability and Impact Matrix).**

Assessing and combining their probability of occurrence and impact. As a project leader, we proactively identify hazards and risks and mitigate underlying conditions of the built environment that can contribute to adverse safety events and impact project performance.

| Likelihood                                                                                                                                                                              |                                                          | Consequences                                                    |                                                    |                     |                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------|---------------------|-------------------------------------------------|
|                                                                                                                                                                                         | Insignificant                                            | Minor                                                           | Moderate                                           | Major               | Catastrophic                                    |
|                                                                                                                                                                                         | 0.05                                                     | 0.1                                                             | 0.2                                                | 0.4                 | 0.8                                             |
| Almost (0.9)<br><br>Has occurred on an annual basis in this organization in the past or circumstances will cause it to happen in the next few years                                     | Moderate<br><br>0.45                                     | High<br><br>0.09<br><br>Patient Complaints                      | Extreme<br><br>0.18                                | Extreme<br><br>0.36 | Extreme<br><br>0.72                             |
| Likely (0.7)<br><br>Has occurred in the last few years in this organization or has occurred recently in other organization in the past or will cause it to happen in the next few years | Moderate<br><br>0.037                                    | High<br><br>0.06<br><br>Competition from other Obesity Centers  | High<br><br>0.14                                   | Extreme<br><br>0.28 | Extreme<br><br>0.56<br><br>Safety Hazard (Fire) |
| Moderate (0.5)<br><br>Has occurred at least once in this organization or has 5% chance of occurring in the next few years                                                               | Low<br><br>0.024<br><br>Satisfaction of Patient Needs    | Moderate<br><br>0.05                                            | High<br><br>0.1<br><br>Compliance with Regulations | High<br><br>0.2     | Extreme<br><br>0.4                              |
| Unlikely (0.3)<br><br>Has never occurred in this organization but has occurred infrequently in similar organization.                                                                    | Low<br><br>0.015<br><br>Evolving technology in equipment | Moderate<br><br>0.03<br><br>New regulation in insurance payment | Moderate<br><br>0.06<br><br>Surgical Complications | High<br><br>0.012   | High<br><br>0.24                                |

|                                                                                             |                         |                                                                                        |                        |                             |                             |
|---------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------|------------------------|-----------------------------|-----------------------------|
| <b>Rare (0.1)</b><br><br>Possible but has not occurred to date in any similar organization. | <i>Low</i><br><br>0.005 | <i>Low</i><br><br>0.01<br><br><i>Building Structure, Standard Fixture and Fittings</i> | <i>Low</i><br><br>0.02 | <i>Moderate</i><br><br>0.04 | <i>Moderate</i><br><br>0.08 |
|---------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------|------------------------|-----------------------------|-----------------------------|

**Risks were properly categorized to effectively manage the risks**

| Risk                                                                                                                                                             | Probability                     | Cost Impact | EMV         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|-------------|
| <b>Fire Incident</b>                                                                                                                                             | 0.56                            | 50,000 SAR  | 28,000 SAR  |
| <b>Patient Complaints<br/>litigations</b>                                                                                                                        | 0.09                            | 40,000 SAR  | 3,600 SAR   |
| <b>Compliance with Regulations<br/>Sanitation, permits</b>                                                                                                       | 0.1                             | 30,000 SAR  | 3,000 SAR   |
| <b>Competition from other Obesity<br/>Centers</b>                                                                                                                | 0.06                            | 35,000 SAR  | 2,100 SAR   |
| <b>EMV of the Project</b><br><br>Expected monetary value (EMV) is a risk management technique to help quantify and compare risks in many aspects of the project. | EMV = Probability x Cost Impact |             | 36, 700 SAR |

## Risk Response and Actions

According to Dan BENTȦ1, 2, Ioan Marius PODEAN1, 2, and Cristian MIRCEAN1 2011, Project risk management provides benefits when it is implemented according to good practice principles and with organizational commitment to taking the decisions and performing actions in an open and unbiased manner.

The following are the responses for each risks identified and categorized.

### Terminate

Eliminate any hazard from the building or prevent any complications during operations.

*Safety Hazard, Surgical Complications*

### **Treat**

Assess the highest ranked and frequently occurring risks and set out a plan to treat or modify these risks to achieve acceptable risk levels. *Patient Complaints, Evolving technology in equipment,*

### **Transfer**

All the risk is left for the third party. The two major types are taking insurance cover and outsourcing. For example, as a project manager I may decide to transfer a collection of transfer risks by taking an insurance policy. *New regulation in insurance payment, Compliance with Regulations (sanitation etc.)*

### **Tolerate.**

Create an environment where people feel at ease because it has been designed specifically for them and they can access everything they need. *Satisfaction of Patient Needs, Building Structure, Standard Fixture and Fittings, Competition from other Obesity Center*

### **Result and Discussion**

All real risks that can affect one or more objectives of the project were identified, defined, categorized and managed using detailed analysis. It took a lot of planning, preparation, obtaining results and evaluation to identify the strengths, weaknesses, opportunities and threats of a project. The risk management undertaken for the Obesity Surgery Center enabled the project organizations to achieve performance and profitability, return of investment and at the same time prevents loss of resources.

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