



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Thursday

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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

Project:

Risk Identification and Analysis (Based on the project you chose in APM)

The objective of this report is to identify project risks, prepare a risk probability matrix, and carry out an analysis of selected risks. Referring to the project you select in **Advanced projects management APM course**, your task is to prepare a risk management plan that identifies potential risks in **the selected stage of the project** and identify risk management strategies.

From the course content and readings, you know that the overall purpose of risk planning is to anticipate possible risk events and be ready to take appropriate action when risk events occur—to eliminate or reduce negative impacts on the project.

You may wish to begin this exercise with a brainstorming about potential risks to get candidate risks “on the table” for consideration. And then identify and refine that wording for risks that have some realistic chance of occurring in this stage. For example, potential weather problems present a real obstacle to completing field data collection by the planned completion date. It is also an issue that the project manager will ultimately have to plan for, as opposed to other issues such as a major disaster (e.g., your office burning down), is not a high-enough probability event that requires much time in planning. As described below, you will select several of the identified risks and carry out a risk analysis.

You will use the distilled list of risks to make a risk probability/impact matrix. The matrix will have at least three categories (high/medium/low) for probability and impact.

Remember that it is important to name risks effectively—use words that describe the risk event and point to the impact on the project (e.g., “injury of field technician disrupts data installation work”).

After completion of the risk matrix, document a risk analysis for the selected risks. This detailed documentation for that selected risk will include:

- a description of the risk and potential impacts (schedule, quality of work, cost, etc.) on the project.
- indicators or triggers that would be monitored to help identify the risk as early as possible.
- specific risk response strategies to take.

Using probability and impact matrix calculate the **Expected Monetary Value (EMV)** for all risks that have the impact in terms of cost \$\$.

Best of luck...

المشروع:

التعرف على المخاطر وتحليلها (بحث مبني على مشروعك الذي اخترته في مادة ادارة المشاريع المتقدمة)

الغرض من هذا التقرير هو التعرف على المخاطر المحيطة بالمرحلة التي تختارها المرحلة من مراحل مشروعك (نفس المرحلة التي اخترت التطرق لها في مشروعك لمادة إدارة المشاريع المتقدمة Advanced project management) حيث أن مهمتك هي تحضير خطة متكاملة لإدارة المخاطر تشمل التعريف بالمخاطر المحتملة التي تحيط بتلك المرحلة وتحضير مصفوفة احتمالية المخاطر ومن ثم القيام بالتحليل لهذه المخاطر المختارة وتحديد استراتيجيات إدارة المخاطر المناسبة لكل خطر على حدة.

من محتويات المقرر والمصادر الأخرى المتاحة أصبحت تعلم الآن أن الغرض العام لمرحلة التخطيط للمخاطر هي توقع أحداث المخاطر المحتملة والتجهز لاتخاذ ردة الفعل المناسبة عند وقوع الخطر - لمنع أو تقليل الآثار السلبية على المشروع.

قد تحبذ بداية هذا البحث بعصف ذهني عن ماهية المخاطر التي قد تحيط بتلك المرحلة من مراحل مشروعك، وذلك للحصول على قائمة بتلك المخاطر. ومن ثم تحديد وتصفية هذه القائمة للوصول إلى قائمة مختصرة بالمخاطر التي لها فرصة واقعية أكبر في الحدوث. على سبيل المثال: المشاكل الجوية المتوقعة والتي تمثل عقبة حقيقية أمام اكتمال جمع البيانات من المواقع في أو قبل الوقت المحدد، هذه تعتبر مشكلة على مدير المشاريع أن يضعها في الحسبان. من ناحية أخرى، فإن المخاطر غير الواقعية مثل الكوارث الطبيعية والأعاصير (تلك التي تسبب حريقاً بمكتبك وفقدان الأوراق المهمة) ليست لها احتمالية وقوع عالية وبالتالي لاتستدعي تضيق الكثير من الوقت في التخطيط لها. كما سيتبين لك، سنقوم باختيار عدة مخاطر من تلك التي قمت بالتعرف عليها لتحليلها.

سنقوم باستخدام هذه القائمة المختصرة لعمل مصفوفة المخاطر (الاحتمالية/الأثر). المصفوفة ستحتوي على الأقل على ثلاث تصنيفات (عالي/متوسط/منخفض) للإحتمالية والأثر.

لانتس استخدام أسماء تصف طبيعة المخاطر بصورة فعالة - قم باستخدام كلمات تصف الحادثة الخطرة وتشير الى أثرها على المشروع (مثل: إصابة أحد الفنيين في الموقع مما يؤثر على أعمال التركيب).

بعد انتهاءك من مصفوفة المخاطر، قم بتوثيق تحليلك للمخاطر المختارة. هذا التسجيل المفصل للمخاطر يجب أن يتضمن:

- وصف للخطر واثاره المحتملة (الجدولة، جودة العمل، التكلفة، الخ)
- المؤشرات والمحفزات التي يجب مراقبتها للمساعدة في التعرف على هذا الخطر قبل وقوعه
- تفصيل للاستجابة المقترحة للتصدي لهذا الخطر

باستخدام مصفوفة الاحتمالات والتأثير ، احسب **القيمة النقدية المتوقعة (EMV)** لجميع المخاطر التي لها تأثير من حيث التكلفة \$\$\$.

مع تمنياتي بالتوفيق..

Risks of equipping hospitals with medical devices

1. Introduction

Surgical instruments and machinery assist surgical procedures and are essential for patient diagnosis and care. A professional biomedical and engineering team oversees the entire medical inventory and is responsible for coping with medical equipment risks in most hospitals and medical centers.

Here is the inventory they oversee: Firstly, Diagnostic equipment, such as X-ray and MRI devices, is used to assess a patient's medical condition. Secondly, this type of device is used to treat and relieve injuries. Equipment for physiotherapy and electrotherapy, as well as ultrasound and laser treatment devices, are included. Thirdly, Surgical instruments which are smaller tools that are classified as follows: – Cutting and piercing instruments, homeostatic forceps, retractors, clamps and distractors, implant accessories.

Overseeing such many devices can be difficult, particularly when the stakes are so high. Lazy control and management not only lead to inefficiency, but it can also have a negative impact on patient outcomes. Bad maintenance, for example, raises the likelihood of downtime, and insufficient servicing and sterilization will affect both doctors and patients.

Therefore, establishing some basic equipment protection and service guidelines is critical. It is necessary to research the risks that can arise as well as their consequences to prepare these results which is the aim of this research.

2. Methodology

1. Poor alarm management

Alarm fatigue is a major threat to patient safety; it is worth noting that 566 people died because of alarm fatigue between 2005 and 2008. According to a study conducted by John Hopkins, medical personnel receive around 350 alarms every patient per day.

2. Infections from contaminated equipment

Patients contracting infections from a hospital are caused by improperly sterilized equipment, ineffective disinfection procedures, and insufficient washing.

According to statistics, one out of every 25 patients in hospitals contracts an infection every day, resulting in 90,000 deaths per year and hefty fines for hospitals.

3. Untagged instruments

Every day, hundreds of patients are admitted to hospitals. At any given moment, several of them would have several IVs attached to them. It is not unusual for attendants to mishandle IV lines in such an environment. They've been known to give patients the wrong fluids, set the wrong flow rates, and even fail to put medication on their patients.

4. Dangers of radiation exposure

Radiation from medical devices such as X-ray machines, CT scanners, and nuclear imagers may put a patient's health at risk if they are overexposed.

Inappropriate handling of high-risk equipment is the most common cause of overexposure. If a case of misuse arises, most healthcare organizations lack the required reporting networks. This can exacerbate the radiation's effects.

5. Surgical Fires

Around 550 to 650 surgical fires occur in the US every year. If such an accident happens during a surgical procedure, it is likely to cause catastrophic injuries. Surgical fires occur as flammable materials, combustion points, and oxidizers are used in procedures.

	Risk	Probability	Impact	Action
1	Poor alarm management	0.3	0.7	Configure equipment alarms to go off only in clinically important incidents that need urgent intervention to prevent such mishaps. To improve response times, you can also prioritize alarms and give them codes. Ensure that all alarms are routed to the appropriate staff so that they do not pile up.
2	Infections from contaminated equipment	0.3	0.9	When it comes to medical equipment safety, hospitals cannot afford to be complacent. If your staff is having trouble keeping up with maintenance plans, consider using specialized medical equipment management software to automate equipment servicing.
3	Untagged instruments	0.4	0.8	Labeling each IV line as well as all potential sources is a neat way to tackle this ordeal. Instruments that are clearly labeled reduce the risk of incorrect administration, improve response times, and allow for more seamless operating procedures.
4	Dangers of radiation exposure	0.4	0.7	Perform personnel surveillance, obtain licenses and permits, follow carefully set out guidelines, and reduce radiation

				exposure.
•	Surgical Fires	0.3	0.8	Outlining a clear plan for dealing with a fire if one occurs. Conducting routine exercises to allow employees to act effectively in an emergency. When working in oxygen-rich conditions, special care must be taken.

Table (1)

After collecting and evaluating the risks, we are going to evaluate the severity and start thinking about the response plans for each risk and try to mitigate the impact. For calculating the severity, we used Risks Matrix to find the response plan.

Probability	0.7-1	high	high	medium
	0.3-0.69	high	medium	low
	0-0.29	medium	low	low
		0.7-1	0.3-0.69	0-0.29
		Impact		

Figure (1)

3.

Results

Patients' well-being should not be jeopardized by a facility that is supposed to provide for them. Therefore, hospitals must work hard to ensure that their services comply with health and safety laws and do not endanger patients or staff. According to the World Health Organization's recommendations, by taking these three moves, you will reduce the risks associated with medical equipment: You perform clinical trials with both machines during pre-market

control. To minimize the risks of purchasing substandard equipment, make sure your vendor is licensed.

4. Discussion

In table number one, we went through the most common, expected, effective risks that may face a new hospital equipping section. These risks were evaluated to detect the probability and the impact resulting.

In figure number one and using the risk matrix, it was important to make a study about the severity and the expected situation for each of the risks counted in table number one. We also introduced some actions that should be applied as a migration plan.

5. References

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