



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 الخميس 2021-05-20 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 **each 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 project. 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 بكل مرحلة من مراحل المشروع, تحضير مصفوفة احتمالية المخاطر ومن ثم القيام بالتحليل لهذه المخاطر المختارة. مهمتك هي تحضير خطة متكاملة لإدارة المخاطر تشمل التعريف بالمخاطر المحتملة التي تحيط بكل مرحلة من مراحل مشروعك (نفس المشروع الذي اخترته في مادة إدارة المشاريع المتقدمة Advanced project management). ومن ثم القيام بتحديد استراتيجيات إدارة المخاطر المناسبة لكل خطر على حدة.

من محتويات المقرر والمصادر الأخرى المتاحة أصبحت تعلم الان 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 بكل مرحلة من مراحل مشروعك, وذلك للحصول على قائمة بتلك المخاطر. ومن ثم تحديد وتصنيف 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، ستقوم باختيار عدة مخاطر من تلك التي قمت بالتعرف عليها لتحليلها.

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

لاتنس 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..

مقدمه :

تسعى وزارة الصحة دائما لتطوير الاداء للمنشآت التابعة لها من خلال اطلاق كثير من المبادرات تحت شعار مجتمع حيوي والذي هو احد محاور رؤية المملكة 2030 ، وكجزء من انتمائنا لهذا الوطن ثم الانتماء للمنشآت الصحية التابعة لوزارة الصحة والمسؤولية الاجتماعية لبلدنا ، اعرض عليكم مبادرة تحسين تلمح نيل رضاكم واستحسانكم ، هدفها توحيد الاداء بمراكز السكر ، وتطوير الاداء بشكل مستمر .

ولأن المملكة تسعى لخصخصة القطاعات العامة الحكومية ، ومنها خدمات وزارة الصحة ، فإنه يجب الاستفادة من الأنظمة الصحية الأخرى التي امتهنت الصحة للأعمال التجارية الخاصة ، واخذ ما يستفاد من تجاربهم بما ينعكس إيجابا على الخدمات المقدمة من خصخصة الاجهزة التابعة لوزارة الصحة دون الاضرار بحياة وصحة المواطن والمقيم والتي بنيت عليها رؤية المملكة 2030.

رؤية 2030 المحاور الرئيسية لرؤية المملكة 2030

المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

إطار حوكمة تحقيق "رؤية المملكة العربية السعودية 2030"

محاور الرؤية 2030



وطن طموح



اقتصاد مزدهر



مجتمع حيوي

ولأن الخصخصة تعني تحويل المؤسسات الحكومية إلى مؤسسات خاصة ، تقدم الخدمات بمقابل مادي ، وتتطلع تلك الخدمات إلى إرضاء المستفيد ، لذا فيجب ان تكون القيمة المدفوعة بذات الجودة الخدمة المقدمة التي يتطلع اليها العميل أو ان تفوق الخدمة تطلعات المستفيدين ، وهذا يدعونا لسؤالين مهمين جدا ، هل يمكن تطبيق المفاهيم الاقتصادية على الخدمات الصحية الحكومية ؟ وهل يمكن اشراك العميل المستفيد من تلك الخدمات في تصميم الخدمات الصحية رغم عدم تخصصه بذلك ؟

الخصخصة

يرى دونالد ستون أن الخصخصة هي ان تنتقل الملكية العامة للخاصة، اما راما ندام يرى انها سلسلة من تداخل المشروع العام على السوق الخاصة ، ولربما الثقافة العربية تعطي اقرب وصفا دقيقا وتعريفا اكثر دقة فقد عرف حسين عمر من مصر الخصخصة انها تحويل الاقتصاد إلى الاعتماد على القطاع الخاص بدرجة كبيرة ببيع الأصول المملوكة للحكومة للقطاع الخاص بشكل جزئي أو كلي من أجل تحقيق التنمية من خلال طرح اسهم بالسوق المالية.

إدارة الخدمات الصحية

تعتبر الادارة علم له اصوله ونظرياته ، ويمكن تطبيق المنهج العلمي في دراسته والتحقق منه ، فالموضوعية التي تمتاز بها الادارة كعلم و التنبؤ و قابلية اثبات نتائجها ومن ثم تعميمها جميعها دلالات على أن علم الادارة ينهج منهج علمي . وقد قامت مدارس ادارية على تطبيق المنهج الرياضي والاحصائي لقياس المشكلات الادارية . وفي الجانب الاخر تعتبر الادارة بحاجة ماسة لضرب من الفلسفة ولمسات فنية ، فالإدارة تتعامل مع الانسان والمجتمع ، وتتعامل مع جوانب غير مادية في الانسان والمجتمع تتطلب احيانا الى الذكاء والحكمة واستنباط العلاقات .

الصحة :

وهي حالة من اكتمال سلامة البدن جسديا ونفسيا وعقليا وليس فقط خلو الجسم من الامراض او الوبئة . منظمة الصحة العالمية

والمنشآت الصحية تقدم خدمات اكثر من سلع ، لذلك فإن ادارة الخدمات الصحية تعني القيام بالوظائف الادارية من تخطيط وتنظيم وتنفيذ و تقييم والرقابة على الخدمات الصحية المقدمة بالمنشآت الصحية على كافة مستوياتها ، المستوى الاول للرعاية الصحية ، المستوى الثاني للرعاية الصحية ، والمستوى التخصصي أو الثالث للرعاية الصحية . هل يمكن تطبيق الأنظمة الاقتصادية على الخدمات الصحية ؟

ان التحديات الاقتصادية التي تواجهها الدول حول العالم تحدد توجهاتها الاقتصادية ، وصحة الانسان احد التحديات التي اثرت على الأنظمة الاقتصادية ، ولنا في جائحة كورونا مثال لمدى تأثير الصحة على النظام الاقتصادي في جميع الدول بلا استثناء ، فلا تجد دولة لم تتأثر اقصاها بالاثار الناتج عن هذه الجائحة ، لا سيم الأنظمة الصحية الممولة من قبل الحكومات . ولا يعني تعدد المستشفيات والمراكز الصحية جودتها ، فجودة الخدمات الصحية تخضع لعوامل مؤثرة منها ندرة الكادر الصحي المميز ، بالإضافة لجودة التقنيات المساعدة على تقديم خدمات صحية ممتازة ، والأنظمة الصحية التي تشرع بعض السياسات والاجراءات التي تنصب أساسا في مصلحة المريض أولا .

عبارة اقتصاد تعني كل الأنشطة الاقتصادية والمؤسسات العامة والخاصة بمنطقة جغرافية محددة والذي يطلق عليه أحيانا بالنواتج القومي المحلي ، والذي يعتمد كليا على رأس المال ، والقوى البشرية ، والأرض كموارد .

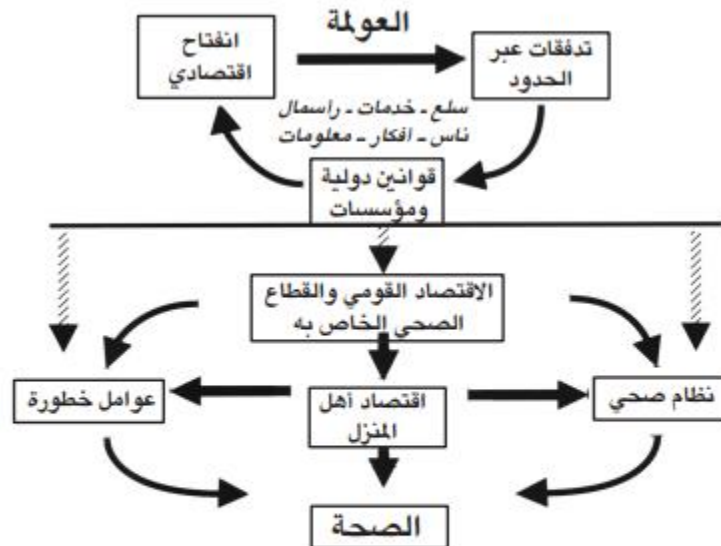
والتي لو استخدمت كل مورد جزء منفصل بحد ذاته لا يتعبّر له قيمة اقتصادية مضافة الا بالارتباط بالموارد الأخرى وبتنظيم معين للحصول على منتج أو خدمة بالنتائج النهائي لمزيج تلك الموارد وتفاعلها تحت أنشطة وممارسات معينة ، وبالتالي تقديم ذلك المنتج أو خدمة للسوق .

اما كلمة سوق تعني المكان الذي يوضع به النتائج النهائي للطلب والعرض وليس بالضرورة ان يكون بمنطقة جغرافية ملموسة للعرض ، فالتقنيات الحديثة جعلت من السوق مفهوماً أوسع من سابق عهده والذي ربط بمكان بيع محددة و اوقات معينة جعلت من كلمة سوق مفهوم ضيق النطاق ذو قصور بحد ذاته ، والان بات التسوق عبر الانترنت والتطبيقات الحديثة ما يعرف بأون لاين ماركت مفهوماً واسع النطاق ذو محدودية القصور ونطاق تسويقي اكبر .

المنتج او المستهلك بضم الميم وسكون الهاء قد يشمل الخدمات المقدمة فضلا عن المنتجات التقليدية المعتادة في السوق ، وهذا ما أضاف لكلمة سوق مفهوم أوسع من منتجات المصانع التجارية ، اقتصاد يشمل الصناعات وصناعة الخدمات العامة والصحية أيضا .

وتكمن الإجابة على هذا السؤال في ان الخدمات الصحية لها ندرة بما انه يتزايد الطلب عليها من حين لآخر مقارنة بحجم العرض المتاح لأسباب منها :

- نسبة كبار السن بالمجتمع ، والأمراض المزمنة المرتبطة بتلك الفئة العمرية وداء السكري احدها .
- التقنيات الحديثة في مجالات الرعاية الصحية ، وطلب الاستفادة منها فعلاج داء السكري سابق عهده ما كان ليصل لهذه الدرجة من التطور الا بوجود التقنيات الحديثة المساعدة على التحكم بمعدلات السكري بالدم .
- توقعات المستفيدين من الخدمات الصحية يزداد من حين لآخر وهذا طبيعة الانسان كما ذكر في هرم ماسلو للاحتياجات الإنسانية .



(الشكل 1-2): العناصر الرئيسية والوصلات بينها على مستوى الاقتصاديات الكبرى قومياً ودولياً.

Source: Smith (2006).

هذا المخطط يوضح مدى تطبيق الأنظمة الاقتصادية في القطاعات التجارية على الأنظمة الصحية وهي الإجابة على تساؤلات مقدمة التقرير وكذلك ارتباطه بالنتائج العام القومي ومدى تأثيره على حياة الفرد والأسرة بالمجتمع .

ولأن الاقتصاد يتطلب مشاريع متقدمة كما هو مسمى هذه المادة الأكاديمية ، فإنه يجب ان يكون تقرير المشروع اللاحق يتميز بخصائص المشروع : فريد من نوعه ، محدد بوقت للانتهاء منه ، يضيف قيمة على ما يقدم حاليا أو جديد كليا .
ما دام ان النظريات الاقتصادية يمكن تطبيقها على الخدمات الصحية فإنه لا بد من انه يمكن تطبيق نظريات إدارة المشاريع وهذا ما شوهه أخيرا في المنشآت الصحية حيث استحدثت وظائف جديدة تتطلب شهادات إدارة مشاريع مؤخرًا . اما للتحسين أو لتقديم خدمات جديدة فريدة من نوعها وهنا يتبادر إلى الذهن سؤال الدراسة هل للاستثمار في الرعاية الصحية مخاطر مثلما هي في المشاريع ؟
وللإجابة على هذا السؤال يجب ربط مفهوم المخاطر وادارتها مع إدارة الخدمات الصحية .

When we hear RISK its mean something could be happen in the future unfavorable except in project management or any management could be negative or positive risk which can be favorable and should used to reach our target .

So RISK can be defined with 3 components :

- Its an event
- Probability occurrence of the event
- That event has an effect on project

Risk manager : is a person (manger or employee) who takes a Risk into consideration in his or her daily work . we can say the good example to know how far we are using risk management in our life , no one can across street until he will have looked to left or right .in work I can say expecting the risk and how we can face it if happened .

for person who able to think in his head what is possible can happen it future can effect on the project .

project risk management : the process of conducting risk management planning , identification ,analysis , response planning and monitoring and controlling on a project.

importance of Risk management :

- Promote interrupted progression of the activities within the project
- Giving confidence of the project which applied scientifically
- Promote communication with project people
- Support decision making of the project

Benefits of project risk management :

- Support project planning .
- Support effective of resources .
- Promoting continue of improvement .
- Minimized the shock of unwelcome surprises .
- Quick grasp of a new appropriates .
- Enhance communication .
- Enhance project management process .

ولكن ما هي أصناف المخاطر بشكل عام ؟

هناك 4 أصناف للمخاطر ومثلما ذكر انفا ليست بالضرورة ان تكون جميعا لها اثر سلبي على المنشأة الصحية وهي :

- Oppoturnity risks
- Complainece risks
- Control risks
- Hazard risks

لنتحدث قليلا عن المخاطر للخدمات الصحية بشكل عام ، وان كانت المخاطر حسب نوع المشروع المطلوب تنفيذه داخل الخدمات الصحية ،

حياة الانسان لعلها اكبر المخاطر التي يتعامل معها أي مشروع صحي ، تهديد حياة الانسان والمصنفة hazard risks ، لا تختلف عن كونها Oppoturnity risks حالات الطلب على المنشآت الصحية يتزايد من حين لآخر اما باختلاف حالات الامراض الجديدة ، او تزايد اعمار كبار السن ، أو سعي الحكومات إلى الارتقاء بخدماتها الصحية لتصبح من مصاف دول العالم المتقدمة في مجال تقديم الخدمات الصحية والتي تجذب المستفيدين للخدمات الصحية لتلقي تلك الخدمات حتى من خارج الدولة نفسها ،

Diabetes mellitus

High prevalence of DM in Saudi Arabia with lack of education of DM complications people who has diabetes or there families could effect in whole healthcare system , Saudi government vision 2030 focusing on Quality of Life Program 2020, it is one of the Vision Realization Programs of Saudi Arabia 2030. It aims to improve the lifestyle of individual and family and to build a society in which individuals enjoy a balanced lifestyle, by setting up the environment necessary to support and provide new options that enhance the participation of citizens and residents in cultural, entertainment and sport activities. The achievement of the Program objectives contributes to create many jobs and to diversify the economic activity, aiming to include Saudi cities within the list of the best cities to live in the world. DM can be challenge to achieve target government looking for. DKA is series condition could happen for people with T1DM if patient couldn't recognize rapidly rising of BG . HHS is not less dangerous than DKA in which could happen to patient with DM T2DM .

Hypothesis

Is Using (CGM) effect positively on DM patients quality of life, (economic impact and effectiveness) reduce cost of DM patients for long term on MOH of Saudi Arabia?

Study limitations

This study done to identify CGM and SMBG impact on DM T2, T1 patients in KSA , until 2018 . Other categories of diabetes excluded gestational diabetes (a state of hyperglycemia which develops during pregnancy) and "other" rarer causes (genetic syndromes, acquired processes such as pancreatitis, diseases such as cystic fibrosis, exposure to certain drugs, viruses, and unknown causes), impaired fasting glucose or impaired glucose tolerance.

Literature review

According to, World Health Organization (WHO, 2017), a 347 million people worldwide have diabetes. In low and middle-income countries more than 83% of diabetes deaths occur. There were 382 million people living with diabetes worldwide in 2013, of whom 35 million were from the Middle East and North Africa (MENA), 56 million from Europe and 138 million from Western Pacific countries (the International Diabetes Federation (IDF), 2016). Additionally the number of people living with diabetes worldwide is expected to reach 592 million by 2035 (IDF, 2016).

Also, (Majeed et al., 2014) reported that, the countries of Middle East and North Africa are facing significant challenges in coming decades as the prevalence of diabetes increases.

to sum it up, This increase is driven by a range of factors including rapid economic development and urbanization; changes in lifestyle that have led to reduced levels of physical activity; an increased intake of refined carbohydrates; and a rise in obesity .

According to (Al-Mazrou, Khoja & Rao, 2005) The Saudi government has a constitutional responsibility to provide all its citizens with adequate healthcare. Additionally, (Alwakid, 2008) showed that , Article 3 of the Saudi constitution states that every citizen in Saudi is entitled to state-provided healthcare Although in reality there exists a stark contrast in healthcare provision throughout the country through various private and public sector agencies.

According to (Al-Shahrani AM , 2012) the number of people with diabetes in the Kingdom of Saudi Arabia is increasing due to population growth, aging, urbanization, and increasing prevalence of obesity and physical inactivity. The overall prevalence of diabetes was 23.7%, with 26.2% being males and 21.5% females. The calculated age-adjusted prevalence for Saudi population for the year 2000 is 21.9%. Diabetes mellitus is more prevalent among Saudis living in urban areas 25.5% compared to rural areas as 19.5%. Despite the readily available access to healthcare facilities in Saudi Arabia, 28% of diabetics were unaware of having diabetes.

So, diabetes education has been acknowledged as essential in the maintenance of good glycemic control and prevention of chronic diabetic complications. It is widely accepted as the cornerstone of successful diabetes management.

According to (Weinger, K. Carver, C. 2009) As diabetes education has become more patient centered and theoretically based, diabetes self-management programs are now putting a greater emphasis on providing the ongoing support to sustain self-management gains made by patients as a result of education and incorporating self-management support into their structure. Educators must consider expanding their roles and responsibilities to facilitate diabetes education at three levels.

Few, Studies on the impact of diabetes health education in Saudi Arabia are conducted, form these studies study by Khalid O. Abu Sabbah et al (2014) concluded that, the poor practice about the management plan of diabetic care particularly the non-pharmacological component of the plan.

Study of Khalid (2012) found that, only 15% of participants had controlled glycaemic level despite a high level of dependence on medications is very good evidence that medication alone, is not the complete answer to the effective management of T2DM in the study context. The fact that the study participants demonstrated low levels of compliance with most other self-management practices indicates that they were facing difficulties and obstacles to practice optimal self-management activities. Furthermore, these findings reflect serious limitations in the way T2DM self management is promoted and enhanced in the various study locations

Study of Ali Hassan (2017) presented important information to the public and health authorities in Saudi Arabia regarding type 2 diabetes management. These findings are not limited to KFMC, but should be made available to all. The study highlights that there is still room for much work to be done. This includes special training for health workers to ensure quality in the delivery of information to the public and thus quality healthcare. Equipping healthcare personnel with the relevant information will make sure that they boost their confidence and thus their accuracy in information delivery.

The current study is aimed to study the role of diabetes educators in reduce the number of patients admission in King Salman hospital in Saudi Arabia.

Types of Diabetes

There are two main types of diabetes, type 1 and type 2. Diabetes Association of America (2008) defines type 1 diabetes as the body's failure to produce insulin, the hormone needed to convert glucose to energy. Formerly known as juvenile diabetes, Type I diabetes is commonly diagnosed in children and young people. The second type of diabetes was previously known as adult diabetes. While obesity is strongly linked to Type 2 diabetes, other causes remain unknown. Although genetics plays an important role in both species, the main cause remains a mystery. The quality of patient self-care and attention to biomedical signs may predict the frequency of frequent acute cases leading to emergency room visits or to hospitals.

Diabetes in the Kingdom of Saudi Arabia

Type 2 diabetes recorded high prevalence rates in Saudi Arabia, which reached 32.8% in the latest statistic, and is expected to reach 45.36% in 2030.

For his part, the Chairman of the Board of Directors of the Saudi Society for Diabetes and Endocrinology in the Eastern region, Abdulaziz Turki, that the treatment of diabetes costs the Ministry of Health about 40% of its budget annually, saying that "there is a possibility that this cost in the coming years, To reduce them by investing in preventive medicine, health education for patients, and prevent any complications from the foundation. " Recent statistics indicate a steady rise in the incidence of type 2 diabetes, especially in the Gulf States. Saudi Arabia is one of the highest countries in the incidence of disease, and may reach epidemic proportions, which is also an economic burden, due to the noticeable change in lifestyle , Which is the lack of movement, and the increase in eating fast food, leading to obesity, which in turn is one of the leading causes of diabetes.

Importance of the study :

This . Exploratory and descriptive studies come under the non experimental research Exploratory and descriptive researches seek to explore or identify the kinds of factors The final result is a list or factors as .responsible for the variables under investigation revealed by the respondents in the research.

Its Retrospective design & Longitudinal study , To comparison the faineance impact between SBGM and CGM to Saudi MOH as project .

This study to the CGM in reduces the number of patients readmission in Saudi Arabia a first attempt toward exploring the effect of diabetes Monitoring.. The researcher therefore believes that this study is mainly derived its importance from its focus.

Complications of the insulin treatment

Diabetes mellitus is characterized as a gathering of metabolic infections portrayed by hyperglycemia, which when untreated can prompt long haul intricacies, including small scale and macrovascular difficulties. Tight glycemic control with serious insulin treatment has been proposed to lessen the danger of such complexities in a few diabetes populaces; notwithstanding, such a methodology can likewise be related with dangers and difficulties.

The significant reactions of insulin taken for diabetes incorporate low glucose (hypoglycemia), hypertrophy (growth of the zone of the body that has gotten such a large number of insulin infusions), and rash at the site of infusion or over the whole body (uncommon). The manifestations of the most widely recognized confusion, for example low glucose, incorporate outrageous craving, weariness, fractiousness, cold sweats, trembling hands, extreme nervousness and a general feeling of disarray. They may be the indications of an insulin overdose, a possibly risky entanglement with diabetes, which happens to numerous diabetic patients .Fortunately, most scenes identified with insulin are avoidable if patients stay with a couple of basic standards.

Diabetic ketoacidosis (DKA) is another insulin complexity, which is the aftereffect of not taking enough insulin. All things considered, intemperate pee in light of high sugar causes serious lack of hydration. In the meantime, without enough insulin to permit sugar

assimilation, the body's cells go about as though they are starving. Without insulin, patients with sort I diabetes grow seriously raised glucose levels. This prompts expanded pee glucose, which thusly prompts extreme loss of liquid and electrolytes in the pee. Absence of insulin likewise makes the failure store fat and protein alongside breakdown of existing fat and protein stores. This dysregulation results during the time spent ketosis and the arrival of ketones into the blood. Ketones turn the blood acidic, a condition called diabetic ketoacidosis (DKA). Manifestations of diabetic ketoacidosis incorporate sickness, retching, and stomach torment. Without brief therapeutic treatment, patients with diabetic ketoacidosis can quickly go into stun, unconsciousness, and even demise (on the same page).

Diabetic ketoacidosis (DKA) can be brought about by contaminations, stress, or injury, all of which may build insulin prerequisites. What's more, missing portions of insulin is additionally a conspicuous hazard factor for creating diabetic ketoacidosis. Pressing treatment of diabetic ketoacidosis includes the intravenous organization of liquid, electrolytes, and insulin, more often than not in an emergency clinic emergency unit. Lack of hydration can be exceptionally serious, and it isn't surprising to need to supplant 6-7 liters of liquid when an individual exhibits in diabetic ketoacidosis. Anti-infection agents are given for contaminations. With treatment, irregular glucose levels, ketone creation, acidosis, and lack of hydration can be turned around quickly, and patients can recoup amazingly well (www.medicinenet.com/diabetes_mellitus).

Like DKA, hyperosmolar hyperglycemic nonketotic disorder (HHNS) causes significant lack of hydration and can be hazardous. It is an incredibly genuine confusion that can prompt diabetic extreme lethargies and even demise in sort II diabetes. Hyperosmolar hyperglycemic disorder is significantly less normal than DKA and will in general occur in more established, stout patients with sort II diabetes .

When they happen, these insulin inconveniences require hospitalization for treatment. The backbones of treatment for both HHNS and DKA are the equivalent: adjustment of liquid shortfalls, electrolyte awkward nature, and hyperglycemia. Furthermore, it is especially significant in HHNS to distinguish and address the hidden trigger condition. Hyperosmolar hyperglycemic nonketotic disorder is regularly veiled by the hastening

condition and comorbidities; it must be effectively looked for and the encouraging condition ought to be recognized and treated.

Furthermore, HHNS has a high death rate. The liquid shortage is twofold than found in diabetic ketoacidosis. The insulin treatment ought to be proceeded until the patient's psychological status improves, hyper osmolality settle, and the objective glucose level is come to.

The economic effects of diabetes

Diabetes is a complicated and costly life-long disease with no cure in sight. Brandel et al. (2003) State diabetes prevalence worldwide is increasing, as is demand for medical care and cost. In 2007, the estimated economic cost of diabetes in the United States was \$ 174 billion. These 20 percent of healthcare costs are spent on diabetes care, and one out of every 10 dollars is spent on health care, which is directly attributable to complications of diabetes. But the cost does not stop here; the loss of the nation's economic productivity of nearly 60 billion. Interestingly, these stunning totals are incomplete because the cost associated with undiagnosed diabetes, about 25%, and unequal care and loss of productivity for family members of diabetic patients are not included.

Many people with diabetes can live healthy lives with the management of appropriate personal and medical illnesses; however, a percentage of people with diabetes will suffer from acute illness that requires emergency treatment and is often in hospital. Unnecessary re-entry to the hospital is common and costly, unfortunately, in terms of the quality of life of the patient and financially for both the patient and the health care system. ADA (2008) suggests that medical costs are 11% higher in patients with diabetes than those who do not.

In Saudi Arabia

Based on the MOH of database Saudi Arabia approximately 0.9 million people in 1992 and 2.5 million people in 2010 have been diagnosed with diabetes. Analysis of the 1992-2010 MOH database suggests that the number of people diagnosed with diabetes increased by 1.6 million (or 183%) during the last 18 years. People diagnosed with

diabetes, on average, have medical healthcare expenditures that are ten times higher (\$3,686 vs. \$380) than what expenditures would be in the absence of diabetes. Over 96% of all medical healthcare expenditures attributed to diabetes are incurred by persons of Saudi nationality, with the remaining 4% incurred by persons of non-Saudi nationality. The population age 45-60 incurs 45% of diabetes-attributed costs, with the remaining population under age 15 incurs 3.8%, age 15-44 incurs 27.5%, and age 60 and above incurs 23.8%.

biomarkers of diabetes

Diabetes is a complex metabolic disorder in which the body can not use glucose correctly. The disease management team uses many vital tools or indicators to assess the current disease status and disease progression. Much information about the condition of diabetics can be obtained by focusing on two vital indicators, blood sugar levels and blood pressure. If these important parameters are managed for disease and care, outcomes (as measured by acute episodes, chronic side effects, or hospital re-admissions) have improved significantly.

value of Blood glucose

Among the tools used to manage diabetes, blood glucose values provide most of the information necessary in the management of diabetes (ADA, 2008). Given the acute and chronic aspects of diabetes, it is recommended to measure blood glucose regularly by the patient throughout the day to check for fluctuations in blood glucose caused by eating, exercise, stress or medication. It should be measured three to four times a year by a doctor using the A1c hemoglobin laboratory.

Patients measure their blood using a small handheld device. A small drop of blood is required. Mg / dL (mg / dL) is the standard measure of blood glucose in the United States. For people who do not have diabetes, blood sugar levels are automatically regulated by the body within the optimal range of 70 to 130 mg / dl. Using this value as a goal, patients are urged to adjust the amount of food, activity and / or medication to maintain or restore appropriate blood glucose values.

National diabetes experts from the American College of Endocrinology and the American Association of Clinical Endocrinology have met to review the importance of controlling blood sugar and clinical pathways for diabetics. These experts compiled research reviews and monitoring data and developed a position statement on glucose management for patients in hospitals. They concluded that the target blood sugar of 80-110 mg / dl is necessary to reduce mortality, infection, kidney failure and also reduce the length of hospital stay. Tragically, when a diabetic patient is admitted to hospital for reasons other than diabetes, management of diabetes is "generally considered to be of secondary importance compared to the condition that led to acceptance." Blood glucose control during hospital treatment can be controlled by placing the patient on a solid foundation at exit and the possibility of saving significant human and economic costs.

Because diabetes education and glucose management are often overlooked while hospitalized, patients are excluded without the necessary survival skills or care management plan. A goal-oriented plan should be developed with a short-term and long-term medical team. Glucose tests, and guidelines on survival skills for diabetes, follow-up, and overall management.

Both the results of the patient-administered blood glucose test and the laboratory-directed laboratory test results (HbA1c) are important. While blood-managed blood glucose levels provide a timely level, HbA1c indicates periodic effectiveness of the treatment plan and long-term self-management. Each of these shows the level of diabetes management. The blood sugar level used in this study is the last daily measurement of blood glucose recorded in the patient's hospital chart.

BGM:

For people with type 1 diabetes, frequent testing is the only way to safely and effectively manage blood sugar levels. Most people need to test at least four times per day. If you use an insulin pump, give three or more insulin injections per day, or are a woman with type 1 diabetes who is pregnant, you may need to test as many as seven times per day or more. People who test frequently, especially those using intensive insulin therapy, may consider purchasing several blood glucose monitors to keep at home, work, school, or in a purse or backpack. This allows easier access to testing

equipment, which can increase testing frequency and therefore improve blood sugar control.

Blood sugar monitoring is also important for people with type 2 diabetes. The recommendations for how often you should test are based upon individual factors such as type of treatment (diet versus oral medication versus insulin), level of glycated hemoglobin (A1C), and treatment goals. A health care provider can help you determine how frequently to test.

CGM

Continuous glucose monitoring (CGM) systems use a glucose sensor (contained in a small needle) to measure the level of glucose in the fluid under the skin. The sensor is attached to the skin with a sticky patch, and it wirelessly transmits results to a small recording device (about the size of a cell phone). You can attach the recording device to your clothing, carry in a purse or bag, or place it near you (eg, on a bedside table). The monitor updates and displays your blood sugar level every few minutes.

You must remove the sensor and replace it on a different part of your body approximately once per week. Because of reliability issues and the need to calibrate the devices, CGM does not eliminate the need for at least occasional fingersticks.

Advantages :

There is evidence that people with type 1 diabetes who use a CGM system consistently and reliably (rather than the fingerstick method) have modestly better-controlled blood sugar. (Susana R. Patton, and Mark A Clements, US Endocrinol. 2012 ; 8(1): 27–29)

The CGM displays your blood sugar level every few minutes, allowing you to see if the level is increasing, decreasing, or stable. The receiver can also be set to trigger an alarm if your blood sugar level is above or below a preset level, which can be especially helpful for people who cannot feel when they have low blood glucose (also known as "hypoglycemia unawareness"). (Ziegler R, Heidtmann B, Hilgard D, Hofer S, Rosenbauer J, Holl R. Frequency of SMBG correlates with HbA1c and acute

complications in children and adolescents with type 1 diabetes. *Pediatr Diabetes*. 2011; 12:11–17. [PubMed: 20337978])

You can download blood sugar results from the CGM to your computer or smartphone, allowing you to see blood sugar trends over time. Your doctor or nurse can help you figure out how to use this information to determine if you need to adjust your insulin dose.

Disadvantages :

The continuous glucose sensors may show lower glucose values than blood glucose monitors, especially when blood glucose levels are rapidly rising. The CGM systems also tend to be less accurate when the blood sugar is low (<70 mg/dL or 3.9 mmol/L), and therefore may not be able to reliably indicate when you are low. Although the accuracy of CGM is improving, CGM does not eliminate the need for at least occasional fingersticks to calibrate the monitor and to verify that the sensor readings are accurate.

SMBG

Disadvantages of SMBG are the impact of user error on test accuracy(Bode BW. The Accuracy and Interferences in Self-monitoring of Blood Glucose. *US Endocrine Disease*. 2007:46–48).

the need for multiple finger-stick blood samples each day, and the limited data available, Efficacy studies support the use of SMBG in diabetes management in youth(Ziegler R, Heidtmann B, Hilgard D, Hofer S, Rosenbauer J, Holl R. Frequency of SMBG correlates with HbA1c and acute complications in children and adolescents with type 1 diabetes. *Pediatr Diabetes*. 2011; 12:11–17. [PubMed: 20337978])

Glucose monitoring is an important component of type 1 diabetes treatment. Careful consideration of the advantages and disadvantages of SMBG and CGM can help providers identify the approach that best fits with youths' lifestyle and treatment goals. Further research is needed to compare the efficacy and cost effectiveness of each approach in pediatrics(Susana R. Patton, and Mark A Clements,*US Endocrinol*. 2012 ; 8(1): 27–29)

comparing between hospitalization of DKA and CGMs,SMBG cost for long term :

hospital admission	CGM	SMBG	
100	0	0	ER doctor
200	0	0	Con. Doctor
100	0	0	bed
2400	0	0	bed in ICU
400	0	0	ventilator
168	0	0	medications
100	0	0	IVF
23	0	0	glucose test
32	0	0	sodium test
145	0	0	HbA1C
50	0	0	chloride test
32	0	0	Uric Acid test
3750 SR per one day	500 SR per month +250 once	240 per month +250 once	total

MOH database suggests that the number of people diagnosed with diabetes increased by 1.6 million , 19% has an experiences with DKA (Saudi medical journal 15 · January 1994) , patient who had admitted must be stay in hospital for 3 days at list . according all this information we collect we can say total cost of CGM less than admission patient just for DKA .

total direct cost per year for each :

Hospital admission in DKA only	CGM	Type
1,710,000,000 SR	1,200,000,000 SR	in one year
1,710,000,000 SR	800,000,000 SR	2nd year
3,420,000,000 SR	2,000,000,000 SR	total

142000000 SR can be using to bullied some hospitals in some cities need healthcare services within 2 years .

العلاقة ما بين النتائج وادارة المخاطر وتحديد مخاطر الفرصة

Oppoturnity risks

وزارة الصحة تحديدا ملتزمة بتقديم أجهزة فحص السكري جزء من تقديم الرعاية للوقاية من مضاعفات السكري ، لذا فإن فعليا ما يصرف على شرائح السكري والتي يحتاج فيها مصاب السكري للفحص 4 مرات على الأقل في اليوم ، قد يمكن استبدالها بجهاز المجس أو المستشعر الذي يواصل قياس السكري لأكثر من مره خلال الدقيقة الواحدة . ومن خلال Expected monetary value (EMV) يمكن المقارنة ما بين القيمة الحقيقية المدفوعة حاليا وما يمكن ان يوفر خلال سنتين قادمتين في حال استغلال الفرصة . , وحسب دراسة)

Reduction in Diabetic Ketoacidosis and Severe Hypoglycemia in Pediatric Type 1 Diabetes During the First Year of Continuous Glucose Monitoring (Diabetes During the First Year of Continuous Glucose Monitoring) فإن معامل p لاستخدام أجهزة فحص الدم العشوائي عن طريق الوخز (1) كما في الجدول ادناه . بينما تنخفض احتمالية الإصابة خلال 6 اشهر فقط بالحموضة الكيتونية الى نصف المجموع (0,5) .

RISK CONTINGENCY P*IC	I (COST IMPACT)	P (RISK PROBABILITY)	RISK
3750	3750	1,0	SBGM , DKA
1875	3750	0,5	DKA, CGM

وعند الحديث عن سنوات طوال فإن تخفيض التكلفة قد يوفر على وزارة الصحة الكثير من الذي تدفعه حالياً للوقاية من الإصابة بحدوث الحموضة الكيتونية ، او حتى تقليل تكلفة علاج الحموضة الكيتونية . وذلك للمزايا التي تتمتع بها أجهزة CGM والتي تنتبأ بعلامات الحموضة الكيتونية قبل حدوث الإصابة ، هذا كله في حالات مخاطر وحيدة فقط وهي مخاطر الفرصة .

اما Hazard risk فمخاطر الحموضة الكيتونية احدها لكن ليست الوحيدة ، حالات الهبوط في معدلات السكر ، حالات الارتفاعات في معدلات السكر ، والتي من شأنها التأثير على صحة الانسان واحتمال ظهور مضافات جديدة ، فحسب منظمة السكر الامريكية ADA فإن عدم انتظام معدلات السكر مسؤولة عن :

- مشاكل البصر 20 ضعفا الأشخاص الآخرين المتحكمين .
- الازمات القلبية من 2 الى 5 اضعاف الأشخاص المتحكمين .
- مشاكل الكلى والفشل الكلوي 25 ضعفا الأشخاص المتحكمين .
- بتر الأطراف او فقدان الحركة على تلك الأطراف 40 ضعف الأشخاص المتحكمين .
- جلطات الدماغ من 2 الى 3 اضعاف الأشخاص المتحكمين بالسكري .

Recommendations

For Patients :

We recommend to prescribe CGM as well as medications , Every DM patient has the right to has CGM once and 2 sensor per month .

For Healthcare Providers :

Improving health care providers (nurses – DM Educators) skills on DM management and ways of education .

For Social :

Starting awareness events to identify dangerous of DM , complication , number meaning and management at home to public in deferent places , media and social media .

Finally in this study we covered impact of DM T1&T2 without other types of diabetes , all cost included in this study regarding previous study which was 1994 , then we recommend to study other article which involve our study limits , and new statistical updates .

References

- The level and determinants of diabetes* .(2009) .M .N .A., & Al-Hamad .N .I., Abdella .L .A., Al-Jasem .A .M .S., Moussa .M .A .Al-Adsani 121-128. ,(35(2 ,Diabetes & Metabolism .knowledge in Kuwaiti adults with type 2 diabetes
- 413-420. ,(30(4 ,Diabetic Medicine .Barriers to self- management of diabetes .(2013) .H .P .J., & Groop .A .Ahola
- and glycemic control in adults with type 2 ,self-management ,Self-efficacy* .(2012) .S .E .A., & Froelicher .M .A., Al-Hassan .O .Al-Khawaldeh 10-16. ,(26(1 ,Journal of Diabetes and its Complications .diabetes mellitus
- attitude and practices of diabetic ,Knowledge* .(2013) .B .K .N., & Yeatts .B., Nagelkerke .M., Afandi .J .M., Al-Kaabi .F., El-Sadig .Al-Maskari e52857. ,(8(1 ,PloS one .patients in the United Arab Emirates
- medication ,Diabetes knowledge* .(2011) .F .R., & Saleem .S., Al-Nuri .A., Sundram .A .A., Shafie .M .A., Hassali .S .K., Sulaiman .H .Al-Qazaz 1028-1035. ,(33(6 ,International Journal of Clinical Pharmacy .adherence and glycemic control among patients with type 2 diabetes
- Diabetes knowledge among patients with diabetes mellitus at King* .(2012) .I .H., & Althwabia .F .H., Haddad .M .K., Bani-Khaled .K .Al-Sarihin 72-77. ,(19 (1 ,Journal of Royal Medical Services .Hussein Hospital
- Knowledge and perceptions of* .(2008) .S .S., & Al Adawi .S .A., Ganguly .M .Y., Khan .G., Al Farsi .S .S., Rizvi .A., Al-Shukaili .M .Al Shafae 249. ,(8(1 ,BMC Public Health .diabetes in a semi-urban Omani population
- S4. ,34 ,Diabetes Care .standards of medical care in diabetes—2011 .Executive summary .(American Diabetes Association (2011
- and glycemic control in a ,self-care behaviors ,diabetes knowledge ,Associations between health literacy* .(2011) .E .L .S., & Egede .S .Bains 335-341. ,(13(3 ,Diabetes Technology & Therapeutics .low income population with type 2 diabetes
- Rinehart and Winston. ,Holt :NY ,1963). Social Learning and Personality Development.New York) .H .R .A., & Walters .Bandura
- Toward a unifying theory of behavioural change. :Self-efficacy* .(1977) .A .Bandura

191-215. , (84(12 ,Psychology Review

Prentice-Hall. :NJ ,Englewood Cliffs -A social cognitive theory :Social Foundation of Thought and Action .(1986) .A ,Bandura

Cambridge University Press. :NY ,New York .Self-efficacy in Changing Societies .(1995) .(Ed) .A ,Bandura

Supporting diabetes self-management in .(2009) .P ,Van Royen & . . . ,F.L., Nobels .B., Jenkins ,J., Sabbe ,P., Wens .H., Sunaert .Bastiaens
103-109. , (3(2 ,Primary Care Diabetes .Pilot-study of a group-based programme focusing on diet and exercise .primary care

Research in Nursing & .Conceptual and statistical differences :Mediator and moderator variables in nursing research .(2000) .A .J ,Bennett
415-420. , (23(5 ,Health

Gain in patients' knowledge of diabetes management .(2007) .L .K., & Fogelfeld .B., Kozik .R., Savoy .M., Kazlauskaitė .P .P., Meyer ,Berikai
1587-1589. , (30(6 ,Diabetes Care .targets is associated with better glycemic control

The effects of a web-based intervention on psychosocial well-being among adults aged .(2010) .K .M., & Feldt .F .L., Wolf .R .E., Burr .G ,Bond
446-456. , (36(3 ,The Diabetes Educator .60 and older with diabetes a randomized trial

Systematic review of the psychometric properties and theoretical .(2014) .M .J ,J., & Morales- Asencio .F ,J., Martín- Santos ,Caro- Bautista
1209-1227. , (70(6 ,Journal of Advanced Nursing .grounding of instruments evaluating self- care in people with type 2 Diabetes Mellitus

50-59. , (24(1 ,Care ,Advances in Nursing Science .1978) Fundamental patterns of knowing in nursing) .A .B ,Carper

Lippincott Williams & Wilkins. :PA ,Philadelphia .(Application to clinical practice (13th ed :Nursing Diagnosis .(2009) .J .L ,Carpinto-Moyet

Diabetes knowledge and its .(2012) .C .C .E., & Cowie .J .E., Fradkin .K .S., Bainbridge .L .R., Geiss .N .S., Burrows .S ,Casagrande
DC_111943. , (35(7 ,Diabetes Care .relationship with achieving treatment recommendations in a national sample of people with type 2 diabetes

A Diabetes self-management program designed :Peer Reviewed .(2009) .L .K., & Schauben ,C., Plessel ,M., Brownson ,S., O'Toole ,Castro
6(4) ., Preventing Chronic Disease .for urban American Indians

Association of .(2008) .L .R ,Rothman & . . . ,D .A., Davis ,T., Shintani ,A., Gebretsadik .K .M., Wallston .M .K., Huizinga ,Cavanaugh
737-746. , (148(10 ,Annals of Internal Medicine .numeracy and diabetes control

,depressive symptoms .Exploring the relationship between diabetes self-efficacy .(2010) .L .R .A., & Rothman .K .A., Wallston ,Cherrington 81-89. ,(33(1 ,Journal of Behavioral Medicine .and glycemic control among men and women with type 2 diabetes

355-377. ,(16(4 ,Do family interventions improve health? Journal of Family Nursing .(2010) .A .C ,Chesla

Asia-Pacific .Social support and glycemic control in adult patients with type 2 diabetes mellitus .(2011) .C .Y ,M., & Chia .E ,H., Khoo .B ,Chew 1010539511431300. ,Journal of Public Health

Mosby. :MO ,St Louis ,Year Book .Integrated knowledge development :Theory and Nursing .(1999) .K .M ,L., & Kramer .P ,Chinn

and outcome expectations impact on self-care behaviors and glycemic ,self-efficacy ,Social support .(2006) .J .B ,O., & Garvin .D ,Chlebowy 777-786. ,(32(5 ,The Diabetes Educator .control in Caucasian and African American adults with type 2 diabetes

,The Diabetes Educator .Diet-specific family support and glucose control among Korean immigrants with type 2 diabetes .(2009) .E .S ,Choi 978-985. ,(35(6

113-120. ,(2(3 ,Primary Care Diabetes -a review of published studies :Diabetes self-management education .(2008) .M ,Clark

155. ,(112(1 ,Psychological Bulletin .A power primer .(1992) .J ,Cohen

Lawrence Erlbaum Association. .NJ ,Hillsdale .Statistical power analysis for the behavioral sciences .(1988) .W .J ,Cohen

98-101. ,Current Directions in Psychological Science .Statistical power analysis .(1992) .J ,Cohen

Training community health promoters to implement .(2010) .H ,J., & Strelnick ,S., Zonszein ,S., Merkin ,A., Movsas .E ,M., Walker ,Comellas 141-151. ,(36(1 ,The Diabetes Educator .diabetes self-management support programs for urban minority adults

.Missouri ,Louis .St .and Social Sciences ,Behavioural ,Practical Text for the Health :Using and Interpreting Statistics .(2007) .W .E ,Corty Mosby Elsevier.

The Cochrane .Peer support telephone calls for improving health .(2008) .M .S ,A., & Williams ,O., Lindenmeyer .I ,J., Caramlau ,Dale 10.1002/14651858.CD006903.pub2 :DOI .No.: CD006903 .Art .4 ,Database of Systematic Reviews

Effectiveness of the diabetes .(2008) .K ,Khunti & . . . ,S ,E., Cradock .M ,J., Carey .M ,C., Campbell .T ,S., Skinner ,J., Heller .M ,Davies .education and self-management for ongoing and newly diagnosed (DESMOND) programme for people with newly diagnosed type 2 diabetes cluster randomised controlled trial.

491-495. ,(336 (7642 ,British Medical Journal .BMJ

275-90) Thousand .pp) .Search of nursing science ,(Gayke (Eds .G & ,Kasper .E .C ,Omery .In A .Science and practice .(1995) .H ,Dean SAGE. :(Oaks (US

and participation in medical decision- ,trust ,Literacy and its relationship with self-efficacy .(2007) .P .M ,S., & Pignone .R ,A., Boone .D ,DeWalt S27-S35. ,(31(Supplement 1 ,American Journal of Health Behavior .making

113-120. ,(26(2 .Nursing outlook .The discipline of nursing .(1978) .M .D ,K., & Crowley .S ,Donaldson

.Search of nursing science .Gayke .G & ,Kasper .E .C ,Omery .A .nursing science for nursing practice In :Introduction .(1995) .K .S ,Donaldson SAGE. :(Thousand Oaks (US .(3-12 .pp)

Retrieved from <http://priyadsouza.com/population-of-qatar-by-nationality-in-2017/> .Population of Qatar by Nationality .(2017) .P ,Dsouza

Relationship between self-efficacy and physical activity .(2009) .D ,B., & Smith ,L., Allen .J ,C., Sorenson .B ,F., Provost ,R., Tan .G ,Dutton 270-277. ,(32(3 ,Journal of Behavioral Medicine .among patients with type2diabetes

Tests for correlation and regression :Statistical power analyses using G* Power 3.1 .(2009) .G .A ,A., & Lang ,E., Buchner ,F., Erdfelder ,Faul 1149-1160. ,(41(4 ,Behavior Research Methods .analyses

49-62. ,(1 (1 ,Advances in Nursing Science .A double helix :The relationship between theory and research .(1978) .J ,Fawcett

.L ,M., Baumann .M ,I., Coufal .R ,B., Boothroyd .E ,Fisher .Sage :London Eciy .(Discovering Statistics Using SPSS (3rd ed .(2009) .A ,Field C., ,J .C., Mbanya

.Peer support for self-management of diabetes improved outcomes in international settings .(2012) .C ,J., & Tanasugarn .M ,Rotheram-Borus 130-139. ,(31(1 ,Health Affairs

The reliability and validity of brief .(1998) .K .W .G., Davis .R .M., Hiss .R .A., Anderson .P .E., Barr .G .M., Hess .M .T., Funnel .J ,Fitzgerald 706-710. ,(21(5 ,Diabetes Care .diabetes knowledge testing

the role of social- :Glycemic control among Latinos with type 2 diabetes .(2011) .A ,C., & Philis-Tsimikas .L ,L., Gallo .A ,Fortmann 251. ,(30(3 ,Health Psychology .environmental support resources

Evaluation of a behavior support intervention for patients with poorly controlled .(2011) .M .C ,S., & Mangione ,V., Ochoa ,L., Uy .D ,Frosch 171(22). ,Archives of Internal Medicine .diabetes

National standards for diabetes .(2011) .A .M ,Weiss & . . . ,B ,M., Jensen .G ,B., Hoseney .L ,P., Haas .B ,L., Childs .T .M., Brown .M ,Funnell S89-S96. ,(34(Supplement 1 ,Diabetes Care .self-management education

and social support on ,self-efficacy ,Effects of self-care .(2013) .H ,Y., & Fu ,C., Zhu .M ,R., Kegler ,P., Haardörfer ,J., Zheng ,J., Wang ,Gao 66. ,(14(1 ,BMC Family Practice .glycemic control in adults with type 2 diabetes

Re-thinking the relationship between long-term condition self-management education and the .(2007) .C ,A., & Sanders ,C., Rogers ,Gately 934-945. ,(65(5 ,Social Science & Medicine .utilisation of health services

Physician support for diabetes .(2009) .J .W ,Katon & . . . ,H .E ,J., Lin .E ,D., Ludman .M ,M., Seelig .C ,M., Rutter ,J., Von Korff ,Gensichen 367. ,(9(1 ,BMC Public Health .patients and clinical outcomes

,(34(6 ,The Diabetes Educator .Social support and physical activity in type 2 diabetes a social-ecologic approach .(2008) .J ,Gleeson-Kreig 1037-1044.

self- ,A nationwide survey of diabetes education .(2012) .Y .H ,Yang & . . . ,F ,L., Zhao .Z ,L., Sun ,Q., Shen .Q ,L., Lou ,H., Yuan .X ,Guo 4175-80. ,(125 (23 ,Chinese Medical Journal .management and glycemic control in patients with type 2 diabetes in China

attitude and practice towards ,Improving of type 2 diabetic patients' knowledge .(2012) .S ,M., & Suryawati .I ,S., Mohamed .T ,Hartayu 315. ,(5(1 ,BMC Research Notes .diabetes self-care by implementing community-based interactive approach-diabetes mellitus strategy

International Nursing .Diabetes knowledge and glycemic control among Chinese people with type 2 diabetes .(2007) .J .H .X., & Wharrad .He
280-287. ,(54(3 ,Review

Journal of Advanced .A concept analysis :Self-efficacy with application to adolescent smoking cessation .(2009) .Q .T .M .R., & Griffin ,Heale
1365-2648.2008.04953 .10.1111/j :doi .912-918 ,(65(4 ,Nursing

A .Diabetes control with reciprocal peer support versus nurse care management .(2010) .D .J .F., & Piette .S., Makki .M., Vijan ,Heisler
507-515. ,(153(8 ,Annals of Internal Medicine .randomized trial

,Nursing Outlook .mapping the concepts of validity and reliability :Understanding the error of our ways .(2006) .J .A .A., & Straub .P .Higgins
23-29. ,(54(1

162-171. ,(2(4 ,Nursing Science Quarterly .The challenge to develop knowledge :Nursing science .(1989) .S .A ,Hinshaw

.PA ,Philadelphia .Designing Clinical Research .(2007) .B .T .G., & Newman .D .S., Grady .W .R., Browner .S .B., Cummings .S .Hully
Lippincott Williams & Wilkins.

Home .Facilitators of diabetes self-management among rural individuals .(2014) .L .J., & Steadman .J .S., Palmer .J .W., Grant .C ,Hunt
154-166. ,(32(3 ,Healthcare Nurse

Retrieved from <http://www.idf.org/diabetesatlas/5e/the-global-burden> .(International Diabetes Federation (2011

Retrieved from .Executive Office ,International Diabetes Federation .IDF Diabetes Atlas .(2011) .International Diabetes Federation
http://www.idf.org/sites/default/files/21991_diabAtlas_5thEd.pdf

The impact of promotoras on social support and .(2007) .L .M .C., & O'Toole .G., Wang .F., Bradford .E., Redondo .M., Torres ,Ingram
172S- ,(33(Supplement 6 ,The Diabetes Educator .glycemic control among members of a farmworker community on the US-Mexico border
178S.

Differences in diabetes self-care activities by race/ethnicity and .(2014) .A .S .T., & Everson-Rose .N., Rockwood .J., Ghildayal .P ,Johnson
767-777. ,(40(6 ,The Diabetes Educator .insulin use

Journal of Diabetes and its Complications .Self-care behaviors of Filipino-American adults with type 2 diabetes mellitus .(2010) .L .J .N., & Jordan .D .Jordan 250-258. ,(24(4

self-efficacy and psychological .Social support .(2008) .K ,Y., & Ogino .J., Yajima .H., Takaki .D .M., Wang .H., Sakaue .S., Taniguchi .Kanbara 56-62. ,(80(1 ,Diabetes Research and Clinical Practice .Indonesia ,stress responses among outpatients with diabetes in Yogyakarta

Comparison of family partnership .(2010) .Y .W .C., & Chang .C .C., Chang .W .F., Liu .P .L., Liu .P .C., Chen .S .M., Chang .C .Kang A randomized .conventional care in adult patients with poorly controlled type 2 diabetes in a community hospital .intervention care vs 1363-1373. ,(47(11 ,International Journal of Nursing Studies .controlled trial

Personality and Individual Differences .The mediating role of optimism .social support and well-being ,Self-efficacy .(2006) .C .E ,Karademas 1281-1290. ,(40(6

... ,E .B .M., Swain .M .C., Parker .J .C., Crosson .U., Saha .J., Subramanian .A ,Karter

Diabetes .Barriers to insulin initiation the translating research into action for diabetes insulin starts project .(2010) .G .D ,Marrero & 733-735. ,(33(4 ,Care

Implementation of self- .(2013) .A ,Rogers & ... ,C .R., Chew-Graham .T., Bowen .D., Blakeman .P., Reeves .A., Bower .Kennedy ,British Medical Journal .BMJ .Cluster randomised controlled trial .management support for long-term conditions in routine primary care settings 346.

Influences of spousal support and control on diabetes .(2013) .K .J .S., & Salem .K .M., Rook .M .P., Franks .A .M .M., Stephens .C ,Khan 739. ,(32(7 ,Health Psychology .management through physical activity

A Holistic :Factors Influencing Diabetes Self-Management of Filipino Americans with Type 2 Diabetes Mellitus .(2014) .B .J ,Sonsona Walden University). ,Approach (Doctoral dissertation

Retrieved from .Diabetes Self-efficacy Scale .(1996) .Stanford Patient Education Research Center
<http://patienteducation.stanford.edu/research/sediabetes.pdf>

.A systematic review :The impact of social support on outcomes in adult patients with type 2 diabetes .(2012) .E .L .L., & Egede .J ,Strom 769-781. ,(12(6 ,Current Diabetes Reports

A randomised control trial of a self- (2006) .C .Peterson & . . . ,J .C., Furler .L., Walker .A., Jordan .J., Weeks .H., Belfrage .Swerissen
Patient Education and .Italian and Greek backgrounds ,Chinese ,management program for people with a chronic illness from Vietnamese
360-368. ,(64(1 ,Counseling

Pearson Education Inc. :NY ,New York .(Multivariate Statistics (5th ed .(2007) .S .L .G., & Fidell .B ,Tabachnik

and self-care behaviors among African .quality of life ,Social support .(2008) .M .R .M., & Anderson .M .B., Funnell .M .S., Brown .T ,Tang
266-276. ,(34(2 ,The Diabetes Educator .Americans with type 2 diabetes

An empowerment- :Self-management support in "real-world" settings .(2010) .E .J .B., & Kurlander .M .M., Brown .M .S., Funnell .T ,Tang
178-184. ,(79(2 ,Patient Education and Counseling .based intervention

The moderating effect of social cognitive factors on self-management activities and HbA1c in Thai adults with .(2017) .B .S., Mawn ,Thijampa
34-37. ,(International Journal of Nursing Sciences,4(1 .type-2 diabetes

Promoting couples collaboration in .(2011) .S .R .K., & Weinstock .D., Scales .R., Cibula .R., Brittain .G., Ploutz-Snyder .J .P., Sandberg ,Trief
29(3), ,Health & ,Systems ,Families .The diabetes support project pilot data :type 2 diabetes

The role of family/friend social support in diabetes self-management .(2014) .G .F .G., & Huffman .G .C., Zarini .J .A., Exebio .J ,Vaccaro.253
1-9. ,(2(1 ,Journal of Nutrition and Health .for minorities with type 2 diabetes

.Social support in diabetes .(2005) .H .B .F., & van den Borne .H .M., Crebolder .R .L., Ryckman .G., Knoop .F .A., van der Horst .H ,Van Dam
1-12. ,(59(1 ,Patient Education and Counseling .a systematic review of controlled intervention studies

The psychometric properties of diabetes management self-efficacy .(1999) .L .Shortridge-Baggett & .J., Van-Poelgeest-Eeltink A .Van der Bijl
352-359. ,(30(2 ,Journal of Advance Nursing -scale for patients with type 2 diabetes mellitus

Pearson Prentice Hall. :NH ,Upper Saddle River .(Strategies for Theory Construction in Nursing (5th ed .(2011) .C .K .O., & Avant .L ,Walker

An educational :Promoting diabetes self-management among African Americans .(2010) .S .A., & Persaud .K .A., Stevens .E ,Walker
169-186. ,(21(3 ,Journal of Health Care for the Poor and Underserved .intervention

Literacy- .(2009) .A .D ,DeWalt & . . . ,B .L., Bryant-Shilliday .C .D., Arnold .C., Schillinger .T .K., Davis .H .S., Seligman .A .Wallace
328-333. ,(75(3 ,Patient Education and Counseling .appropriate educational materials and brief counseling improve diabetes self-management

,Western Journal of Nursing Research .Challenges and strategies of instrument translation .(2006) .J .S .L., & Fetzer .H .L., Lee .W .Wang
310-321. ,(28(3

Diabetes knowledge and self- management effects on physiological outcomes in type 2 .(2013) .Y .C .J., & Wang .J., Davis .C., Inouye .Wang
240-247. ,(48(4 ,Nursing Forum .diabetes

170-179. ,(23(1 ,Health Education Research .An internet-based diabetes self-care intervention tailored to self-efficacy .(2008) .C .S .Wangberg

Factors Influencing Diabetes Self-Management Behaviors among Patients with T2DM in Rural Thailand (Doctoral .(2012) .B .Wattanukul
University of Illinois at Chicago) .,dissertation

Social Relations and Health ,Demographics .What shapes diabetes self-efficacy .(2014) .M .W .M., & Goodman .R., Lemonde .R .Weaver
2. ,(5(370 ,J Diabetes Metab .Perceptions

global estimates of the prevalence of diabetes for 2011 and .IDF diabetes atlas .(2011) .J .C., & Shaw .L., Weil .R., Guariguata .D .Whiting
311-321. ,(94(3 ,Diabetes Research and Clinical Practice .2030

Factors influencing the ability to self-manage diabetes for adults living with type 1 or 2 .(2014) .L .L., & Ritchie .A., Whitehead .Wilkinson
111-122 ,(51(1 ,International Journal of Nursing Studies .diabetes

Integrative health coaching for .(2010) .E .Skinner & . . . ,J .S., Wakefield .V., Yeung .T .J., Hawkins .M., Fikkan .Q., Dreusicke .R .Wolever
629-639. ,(36(4 ,The Diabetes Educator .patients with type 2 diabetes a randomized clinical trial

Retrieved from <http://www.emro.who.int/> .Eastern Mediterranean Region ,World Health Organization

Factors influencing diabetes self- management in Chinese people with type 2 .(2008) .K .W., & Whitmer .C., Pan .D., Savage .Y., Toobert .Xu
613-625. ,(31(6 ,Research in Nursing & Health .diabetes

Global healthcare expenditure on diabetes for 2010 .(2010) .G .J., & Nichols .R., Shaw .D., Sicree .J., Vistisen .X., Brown .P., Zhang .Zhang 293-301. ,(87(3 ,Diabetes Research and Clinical Practice .and 2030

,Knowledge and perceptions of diabetes in urban and semi urban population of Peshawar .(2012) .U .I ,K., & Diju .K ,M., Zahir ,Zuhaid 105-8. ,(24(1 ,Abbottabad .Coll .J Ayub Med .Pakistan

M., & .K ,H., Langa ,M., Choi .A ,M., Rosland .D ,Zulman .93-102 ,(44(2 ,Nursing Forum .A concept analysis .Self-efficacy .(2009) .K ,Zulkosky Patient .The influence of diabetes psychosocial attributes and self-management practices on change in diabetes status .(2012) .M ,Heisler 74-80. ,(87(1 ,Education and Counseling

Martin Tauschmann,Birgit Rami-Merhar.2020 Reduction in Diabetic Ketoacidosis and Severe Hypoglycemia in Pediatric Type 1 Diabetes During the First Year of Continuous Glucose A Multicenter Analysis of 3,553 Subjects From the DPV Registry,diabetescare .Monitoring