

Identifying factors contributing to high readmission of diabetic patients



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INTRODUCTION.

Diabetes Mellitus (DM) is a chronic disease. Where the blood circulation contain of high sugar level, it can occurs when the pancreas does not produce enough insulin, or when the body cannot effectively use the insulin it produces (WHO).

Diabetes is a progressive disease that can lead to a significant number of health complications and profoundly reduce quality of life. While many diabetic patients manage the health complication with diet and exercise and require medications to improve uncontrolled blood glucose level.

Diabetes has been treatable since insulin became available in 1921, and type 2 diabetes may be controlled with medications. Preeti (2008). Both type 1 and 2 are chronic conditions that usually cannot be cured. Acute complications include hypoglycemia, diabetic ketoacidosis, or nonketotic hyper osmolar coma. Serious long-term complications include cardiovascular disease, chronic renal failure and retinal damage. Adequate treatment of diabetes is important, to control blood pressure and healthy lifestyle such as smoking cessation and maintaining a body weight.

Treatment of diabetes involves diet, exercise, education, and drugs. If people with diabetes strictly control blood sugar levels, complications are less likely to develop. The goal of diabetes treatment, therefore, is to keep blood sugar levels within the normal range as much as possible. Treatment of high blood pressure and cholesterol levels can prevent some of the complications of diabetes as well.

A good health education from the medical staff in the ward can give a good condition to patient health and prevent patient from admit again to the ward. The health education in the ward should begin from day 1 patient admit to the ward until the patient discharge from the ward. This health education should not stop when the patient is discharge from the ward but it must be continued from the health community to make sure that the patient is healthy.

PROBLEM STATEMENT.

General Objective:

To identify factors contributing to high readmission of diabetic patients post discharge.

1. 2. 3 Specific objective.

To identify why the patient is not take their medication after discharge from the ward.

To study relationship between knowledge and medication to the patient.

In Malaysia, the Third National Health and Morbidity Survey showed that the prevalence of type 2 Diabetes Mellitus (DM) for adults aged 30 years and above was found to be 14. 9% in 2006. Salwa et. al., (2010).

Patients with diabetes should know that how importance their health after they has confirmed have diabetes. Health education to patients and families were given continuously by the nurses when these patients were admitted for stabilization of their DM, from day 1 of admission and continued until they

discharged. With proper health education, the patient should be able to take care for them self until follow up in the clinic.

The health education must include dietary intake and medication. The talk is given by the nutritionist and medication by clinical pharmacist. Nurses should take part in the dietary and medication talk when the patient attends the talk to ensure the compliance by the patient continuously after they discharge from the ward.

In January 2011, there are 4 patient has been readmitted to the male and female medical ward within 2 weeks after discharged from the ward. To prevent from this admission, health education should be given continuously to the patients either in the ward or by the community health care provider when the patient is discharge from the hospital.

CHAPTER 2

2. 1 LITERATURE REVIEW.

The literature review has been searched from internet.

Diabetes mellitus is now a major global public health problem. The incidence and prevalence of diabetes are escalating especially developing and newly industrialized nations. In Malaysia, diabetes is a growing concern. Through the Ministry of Health's six year thematic Healthy Lifestyle Campaign which began in 1991, diabetes mellitus was the theme for the year 1995. Here, the promotion of adopting healthy lifestyle practices relating to the prevention of diabetes namely creating awareness and balance diet, maintain ideal body weight and physical activities were encouraged. The campaign emphasized

on creating, awareness of the disease and its complications to the public.

Rugayah (2007)

According to Zook et. al (1980). Hospitalizations account for about half of all health care expenses, and it has been estimated that 20% of the inpatients in Malaysia and 13% in the USA use more than half of all hospital resources through repeated admissions. During past decades, hospital readmissions have been the subject of retrospective surveys and prospective trials with a view to their prevention. The objective is to review these studies and focus on the frequency of readmissions of diabetes mellitus patient, their causes and validity as a measure of quality of care, and the attempts for their prevention.

The recent literature on hospital readmissions and found that most of them are believed to be caused by patient frailty and progression of chronic disease. However, from 11% to 52% of all readmissions have been judged to be preventable because they were associated with indicators of substandard care during the hospitalization, such as poor resolution of the main problem, unstable therapy at discharge, and inadequate post discharge care and advice. Furthermore, randomized prospective trials have shown that 15% to 85% of all readmissions can be prevented by patient education, pre discharge assessment, and domiciliary aftercare. However, high readmission rates of patients with diabetes mellitus may identify quality-of-care problems. A focus on the specific needs of such patients may lead to the creation of more responsive health care systems for the chronically ill.

Most complications are the result of problems with blood vessels. High sugar levels over a long time cause narrowing of both the small and large blood vessels. The narrowing reduces blood flow to many parts of the body, leading to problems. There are several causes of blood vessel narrowing. Complex sugar-based substances build up in the walls of small blood vessels, causing them to thicken and leak. Poor control of blood sugar levels also tends to cause the levels of fatty substances in the blood to rise, resulting in atherosclerosis.

Poor circulation to the skin can lead to ulcers and infections and causes wounds to heal slowly. People with diabetes are particularly likely to have ulcers and infections of the feet and legs. Too often, these wounds heal slowly or not at all, and amputation of the foot or part of the leg may be needed. Currently there are at least 4-5 patients will be readmission for stabilization then discharged. Upon admission of a patient, this would cause overpopulation of ward, increase expenses and uncontrolled condition of the patient in the ward. Nurse also must provide health education to the patients, their relative and refer patients to nutritionist and education unit for counseled.

Browne (2000) conducted a scientific research on factor for diabetes patient on knowledge and the diabetic drugs for diabetic patients. The major purpose of the research are to identify the important factors for patient compliance in the usage of diabetic drugs, specific knowledge on the action drug, the correct dosage and adverse side effects.

- From Browne (2000), noted that only 15% of the patient knows the action of the drug they are consuming, where as 62% of them consume at the right time and 23% of patients gained a proper knowledge on medication or drug that they are consuming.

In summary it is concluded that the diabetes patient has the more knowledge and information on the adverse effect of the drug compared to the action of oral hypoglycaemic drugs.

According to Ranjini et al,(2003) done a research on knowledge, attitude and practice from patient diabetic at Klinik Kesihatan Seri Manjung, Perak. The findings showed correlation between knowledge, attitude and practice. The finding showed that increases knowledge for patients who have education is better from the patient who does not have any education.

Hospitalizations account for about half of all health care expenses, and it has been estimated that 20% of the inpatients in Malaysia and 13% in the USA use more than half of all hospital resources through repeated admissions. Zook et al (1980). For past decades, hospital readmissions have been the subject of retrospective surveys and prospective trials with a view to their prevention. The objective is to review these studies and focus on the frequency of readmissions of diabetes mellitus patient, their causes and validity as a measure of quality of care, and the attempts for their prevention.

Soeken et al (1991), done a research on readmission rates according to demographic, social, and disease-related characteristics. Researcher Wray et <https://assignbuster.com/identifying-factors-contributing-to-high-readmission-of-diabetic-patients/>

al (1988), done a meta-analysis of 44 studies published before 1990 revealed that age, length of stay during the index hospitalization, and previous use of hospital resources were among the main independent predictors of readmissions. These findings indicate that patient-specific factors predict readmissions.

A study of a national sample of patients with chronic obstructive pulmonary disease or dementia revealed that after adjusting for severity and clinical and demographic characteristics, patients discharged to nursing homes were less likely to be readmitted within 30 days after discharge than those discharged to personal homes. According to Comberg et al (1997) Finally, some studies have found an association between readmission rates and inappropriate care during the index hospitalization. A case-control study revealed that 5 criteria of inpatient care (resolution of main problem, adequacy of the post discharge destination, stability of doses of therapy, and appropriate timing of the first follow-up visit) predicted readmissions within 30 days. Ashton et al (1987) Another case-control study found that a set of disease-specific, explicit criteria of appropriateness of care predicted readmissions. It has been suggested that 1 of 7 readmissions in patients with diabetes, 1 of 5 readmissions in patients with heart failure, and 1 of 12 readmissions in patients with obstructive lung disease were attributable to substandard care. Absence of documentation of discharge planning, increased temperature, intravenous fluids on the day of discharge, or unaddressed abnormal test results at discharge were related to an increased subsequent mortality. Ashton et al (1997). A meta-analysis of 29 studies published from 1975 through 1993 confirmed that low-quality inpatient care

during the index hospitalization increased the risk of subsequent readmissions. Wei et al (1995). At least some readmissions, therefore, are associated with modifiable factors.

Readmission rates have been reported to decline after the implementation of pre-discharge reviews and improved follow-up after discharge. Bean et al (1995) However, non-experimental, before-after study designs are subject to confounding and to regression toward the mean. Confounding refers to changes beyond the planned intervention that occurred over time and that in and of themselves may have reduced readmission rates. Regression to the mean is the tendency of above-average rates to fall toward average over time. Since programs aiming to reduce readmission rates are likely to be implemented in institutions with high readmission rates, their favorable results may reflect a decline that would have occurred on subsequent determinations even without any specific interventions.

The findings concerning the effect of interventions indicate that improved hospital and post discharge care are associated with fewer readmissions. Still, there is evidence that global readmission rates have a limited value as indicators of quality of care. For example, about half of the studies failed to uncover any relationship between quality of care and readmissions. Ashton et al (1997). In all clinical condition readmission rates of patients who received poor-quality care were similar to those of patients whose care was judged acceptable. Thomas (1996). Similarly, assessed risk-adjusted outcomes after renal failure, gastrointestinal tract hemorrhage, stroke, myocardial infarction, and heart failure and concluded that length of stay,

death, and unplanned readmission were predicted mainly by age, severity, and co morbidity. Roe et al (1996).

Hospital readmissions raise concern among health care providers, and therefore efforts for their reduction are likely to be endorsed by clinicians and administrators.

CHAPTER 3

METHODOLOGY

3. 1 Introduction.

This is a prospective study. The data is collect from the patient who admitted to the ward. The project was conducted in the one of the district hospital at Negeri Sembilan.

Data on diabetes was obtained from adult respondents through interviews by trained nurses using a questionnaires. A 2-hour-post - glucose load test was conducted by the nurses to the respondents who self-professed that they were non-diabetics and have not been diagnosed by any, medical personnel. These non-diabetes were measured for their blood glucose level using glucophotometer in a dry non-wipe technique. Those who refused to be examined were classified as refused to be examined and those who could not tolerate glucose due to old age were classified as unable to be examined.

For the purpose of analysis in this survey, the respondents were categorized into 3 categories. The known diabetes were the adult respondents who self-professed they were diabetics and diagnosed by medical personnel. Those non-diabetics who had undergone the 2 hour - post glucose load test and whose blood glucose measurement level of 11.1 mmol/l or more were categorized as undiagnosed diabetes. Those with blood glucose measurement of 7.8 - < 11.1 mmol/l were classified as impaired glucose tolerance (IGT)

The known diabetes were enquired about their treatment status, utilization pattern of health facilities and perceived complications associated with their diabetic condition.

3.2 Research design.

This is prospective study. Data will be collected by reviewing medical records and completing a structured data collection sheet. Data including admission diagnosis, the type of medication that patient receive in the ward, sign and symptom of diabetic mellitus, the correct statement for people with diabetic, when the patient feel hypoglycemia, the hypoglycemia condition, and no identifiers such as medical record numbers, patient's names and gender will be used on the data collection instrument. In this study it will have a graphs, charts, table and summary.

3.3 Sample size.

There is 10 questionnaire was given to diabetic patient in the medical male and medical female ward at the district hospital at Negeri Sembilan. About 30 respondent involved in the interview.

3. 3. 1 Inclusion

- i. How many years the patient have diabetes.
- ii. The patient should understand and can read in Bahasa Melayu or Bahasa English.
- iii. The age of the patients above 40 years - 65 years..

3. 3. 2 Exclusion.

- i. The patient who do not understand and can read in Bahasa Melayu or Bahasa English.
- li For patient who senile or psychiatric patient which they cannot give a cooperation and understand the question during the interview.

3. 4 Instrument.

There is 10 questionnaire about diabetes are given to the patient in the ward.

The patient should give a correct answer when answer the question. There is time frame of the project. It starts from 1st March to 31st March. 2011.

There question are divided to part I and part II. There is 8 question on part I where the answer is to choose a, b, c or d. Part II has 3 question where the patient have to choose true or false in the statement.

The question adopt from the:

Diabetes and Hormone Center of the Pacific Ala Moana Pacific Center

www.testprepreview.com/modules/diabetes.htm -

3. 5 Ethical Consideration.

2. 5. 1 Letter from Head of Department, Health Sciences UiTM to the Hospital

Director for the project. Appendic 1

Approval letter from the Hospital Director to the Health Sciences for the project. Appendic 2

2. 5. 3 Consent from patient, if respondent refused to be interview, the respondent should be dropped from this project. Appendic 3.

3. 6. Limitation.

2. 6. 1 Receive late approval letter from the acedemic.

2. 6. 2 Because this is the distric hospital the total number of admission into the ward is low.

2. 6. 3 If the patient refused for the interview, the respondent should be dropped from the project.

2. 6. 4 The duration time to collect data from the patients should be finish in one month.

CHAPTER 4

4. 1 Result .

A total number of 40 patients were admitted to the both male and female medical wards from 1st March to 31st March 2011. The gender distribution was 33. 33% is female and 66. 66% is male.

There is 96. 7% or 29 of the respondents said that they eat too much of sugar or sweat drink when they are young before they diagnose have diabetes mellitus. The patient was admitted to the ward for stabilization of sugar level. See table 1

Table 1

Frequency

Percent

Caused by eating too much sugar

29

96. 66667

Condition which the body cannot use the food properly

1

3. 333333

Total

30

100

About 80% (24) of the respondents have the common symptoms of diabetes such as frequent urination specially at bed time, where they will get up 2 to 3 times to toilet. Hunger and thirsty specially in the morning before lunch time and 20% (6) of the respondents craving for sweets. See table 2

Table 2

Frequency

Percent

Frequent urination, hunger, thirst

24

80

Craving for sweets

6

20

Total

30

100

70% (21) of the respondents said the following statement is correct for people with diabetes that they should have snacks between-meal. Because they feel hungry and thirsty before they had their lunch in the afternoon or in the evening. They like to had drink and eat some snacks to prevent hunger.

See table 3

Table 3

Frequency

Percent

Everyone with diabetes should have between-meal snacks

21

70

Changes lifestyle

(meal, planning, exercise, medication, stress)

4

13. 33333

Travelling should avoid taking insulin

5

16. 66667

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Total

30

100

76. 7% (21) patients who take insulin once a day said that they take the breakfast 30 minutes after the insulin injection. It show the patient understand why it is important to take breakfast after the medication to prevent from hypoglycemic attack. See table 4.

Table 4

Frequency

Percent

About 30 minutes before breakfast

23

76. 66667

I do not know

7

23. 33333

Total

30

100

46. 7%(14) of the patients have the symptoms of hypoglycemia attack, 20% (6) have sweating, sudden weakness, 16. 7% (5) have trembling or shaking, sudden weakness, and 16. 7% (5) have trembling or shaking and sweating. It showed that the symptom is different between each patient. See table 5

Table 5

Frequency

Percent

1 and 2

5

16. 7

2 and 3

6

20

1 and 3

5

16. 7

all of the above

14

46.7

Total

30

100

What is the reaction of the patient if they get hypoglycemic attack, 73.3% (22) of the patients said that they will eat some food that has sugar or chew some sweet to prevent from severe hypoglycemia attack. They will bring along the sweets if they on exercise, working in the farm or they on vacation.

See table 6

Table 6.

Frequency

Percent

Ignore it and it will go away

5

16.66667

Eat some food that has sugar

22

73.33333

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lie down and see whether it will pass

3

10

Total

30

100

50%(15) of the patients said that confusion is not an indicator of hypoglycemia.

Because the patient know about the sign and symptom of the hypoglycemia and they will prevent from get this attack either in the house or out site of their house compound. They will bring some sweets along with them. See table 7.

Table 7.

Frequency

Percent

Fatigue

7

23. 3

Poor Appetite

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7

23. 3

Tachycardia

1

3. 3

Confusion

15

50

Total

30

100

73. 3% (22) patients said that they are allowed to use as much sugar as they want because they use too and lack of knowledge of the diabetes symptom when they are young. All of the respondents (100%) said that they have greater change to get the complications such as hypoglycemic attack from a patient who does not have diabetes. 93. 3% (28) patients said if they did not control the blood sugar level there is greater change of infection and illness. The infection will take time to heal. See table 8

Table 8

CHAPTER 5

5. 1 Discussion.

The World Health Organization (WHO) has estimated that in the year 2030, Malaysia would have a total of 2. 48 million people with diabetes compared to 0. 94 millions in 2000. In Malaysia, the First National Health and Morbidity Survey (NHMS I) conducted in 1986 reported a prevalence of diabetes of 6. 3% and in the Second National Health and Morbidity Survey (NHMS II) in 1996, this had risen to 8. 3%. The NHMS I and NHMS II involved subjects above 30 years. The third National Health and Morbidity Survey (NHMSIII) conducted between April to July 2006 and included the diabetes module in the survey on subjects above 18 years. Zanariah et al (2008).

Diabetic is a costly, disorder. Defining the distribution of specific characteristics among diabetics can assist in the planning, implementing and evaluating diabetic programmers for primary, secondary and tertiary prevention and control of diabetes. In planning of services for diabetes control, equity policies have to be considered. In this study it show that the patients know that they prone to get diabetes because of take a sweet drinks and rich of sugar in their food.

When the patient in the ward, the nurse should teach the patient how to do the insulin injection, where are the side of injection and tell the patient that he should change the site of the injection to prevent from boil. The nurse should observe the patient how he syringe out the insulin and how to inject to his body. The nurse should remind the patient about sign and symptom of hypoglycemic attack and the precaution of the disease.

The health education should continuously given to the patients from day 1 they admitted until the patient discharge from the ward and continued by the health community by do a home visit to the patient if the patient cannot go to the clinic for follow up.

Regarding the diet, health education from the nutritionist and the medication from the clinical pharmacist should be continued since the patient stay in the ward.

5. 2 Conclusion.

Diabetes prevalence rate in Malaysia has risen much faster than expected, almost double over the last decade. Prevention and control of this chronic disease should be stepped up.

Diabetes is certainly a diagnosis that nobody ever wants to receive. There is no cure, but it can be managed through diet, medication and exercise. Having high blood sugar level is out of control, the result in irreparable damage to the body, particularly with the kidneys, cardiovascular and blindness. Health education to patient on how to manage the disease and how to avoid or prolong adverse effects on the body.