

# The Influence of Indonesia National Health Insurance Program's PROLANIS to Controlling Patient with Diabetes Mellitus Type 2

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**Abstract:** Diabetes mellitus type 2 is a chronic disease caused by resistance to insulin that is often associated with an unhealthy lifestyle. Diabetes mellitus type 2 has serious disease complications if it's not controlled from the outset. These complications include coronary heart disease, stroke and others disease. Therefore, it needs appropriate handling and control for people with type 2 diabetes mellitus in order not to suffer from complications. In the National Health Insurance in Indonesia called JKN, there is a chronic disease management program known as PROLANIS, which also manages diabetes mellitus type 2 preventively and promotively. The purpose of this research is to find whether the PROLANIS program in JKN runs effectively in controlling patient with type 2 diabetes mellitus to avoid complications. The method used in this research is literature study by reviewing articles and scientific journals related to the PROLANIS program. The results obtained in several articles and scientific journals say that with the PROLANIS program it can control some of the clinical diagnostic tests of patients' diabetes mellitus type 2 so that no complications arise and the quality of life increases. But the continuity of some activity isn't good enough, as caused by low attendance of participants. The conclusion in this research is that the PROLANIS program can control patient with diabetes mellitus type 2 to be better and stable so that the risk to experience complications becomes less, but that there is need of some effort to maintaining membership of PROLANIS to keep it stable.

## 1 INTRODUCTION

Diabetes mellitus type 2 is a metabolic disorder disease caused by the presence of insulin resistance in the body so that glucose in the blood can't be converted into energy and eventually leads to hyperglycemia conditions or high glucose levels in the blood. Diabetes mellitus type 2 is one of the most recognized degenerative diseases worldwide because of the ever-increasing number of cases over the decades. According to WHO data, the estimated population of diabetes mellitus in the world in 2014 is 422 million in the adult group. The number increased fourfold compared to 1980, which was about 108 million in the adult group. Increased incidence of diabetes mellitus is closely related to the increase in overweight and obesity rates and other diabetes mellitus risk factors. Global cases of death from diabetes mellitus and its complications in 2012 reached 3.7 million cases. Of the 3.7 million

deaths, many occurred in low-income countries and middle-income countries compared with high-income countries. Complications caused by diabetes mellitus include heart attack, stroke, and kidney failure, amputation of the feet, impairment and loss of vision, and damage to the nerves. Complications of diabetes mellitus are very serious and require control efforts so that these complications can be prevented.

In addition to preventing the occurrence of complications in patients, such control efforts can also reduce the burden of the very large medical costs of these complications. In Indonesia, there is a health insurance program called *Jaminan Kesehatan Nasional*, or more commonly JKN. JKN is a health insurance program organized by the *Badan Penyelenggaran Jaminan Sosial* (BPJS). JKN has a model such as insurance, whereby participants pay a premium each month, and, if participants are treated or visit health facilities, medical expenses will be paid by BPJS by claim method. With the existence

of JKN, the people of Indonesia can be guaranteed in the treatment or visits to the health facility, because there is no need to reimburse, except for certain expenses which are not covered by BPJS. Based on data from BPJS, claims on cases of diabetes mellitus and its complications in 2015 reached 3.27 trillion rupias. The amount of costs incurred associated with diabetes mellitus and its complications require control efforts so that expenditures do not continue to swell. BPJS, as the organizer of health insurance, has made efforts to control the complication of diabetes mellitus disease by designing a program called PROLANIS. PROLANIS, or Chronic Disease Management Program, is an integrated healthcare system by promotive and preventive efforts in controlling patient with chronic diseases such as type 2 diabetes mellitus and hypertension. The aim of the PROLANIS program is promotive and preventive and is expected to prevent complications caused by type 2 diabetes mellitus and hypertension. In knowing whether the goal of the PROLANIS program is achieved or not, it is necessary to monitor and evaluate. To date, there has been no publication in the electronic media by BPJS related to the monitoring and evaluation of PROLANIS programs. Nevertheless, there are several research journals that examine the effectiveness of PROLANIS programs in various regions of Indonesia. From the background, researchers want to know more about the effectiveness of PROLANIS program, especially in controlling patient with diabetes mellitus type 2 and its complications in Indonesia.

## 2 METHOD

In this study, the research method used is descriptive. In the descriptive research method, researchers describe the effectiveness of the PROLANIS program in controlling patient with diabetes mellitus type 2 and its complications. Data are obtained through literature study by reviewing the journals and scientific articles that examine the effectiveness of the PROLANIS program related to diabetes mellitus type 2 disease. The data obtained will be reviewed and analysed and concluded to determine whether the implementation of PROLANIS program is effective or not.

## 3 RESULT

In BPJS, there is no publication of monitoring and evaluation of PROLANIS program, so it is not known whether the PROLANIS program has been effective or not. However, there are several scientific journals that discuss the effectiveness of PROLANIS programs in several regions of Indonesia. In the scientific article *Analysis of Implementation of Chronic Disease Management Program (PROLANIS) on Family Doctor PT ASKES in Palembang City in 2013* by Assupina, Misnaniarti and Rahmiwati, it explained that the PROLANIS program in Palembang City has been well implemented (Assupina, Misnaniarti and Rahmiwati, 2013). From the various activities that are part of the PROLANIS program, there are some that have not run optimally (Assupina, Misnaniarti and Rahmiwati, 2013). These include 1) HBA1C examination, 2) home visit, 3) the establishment of clubs, and 4) sports together (Assupina, Misnaniarti and Rahmiwati, 2013). The following picture of the activity checklist table on the PROLANIS program was conducted by family doctor PT ASKES in Palembang City.

Table 1: Activities Checklist in Family Doctor PT ASKES in Palembang City (Assupina, Misnaniarti and Rahmiwati, 2013)

Name of Activity	Informant			
	4	5	6	7
Health Consultation	√	√	√	√
GDP/ GDPP, BMI, and Blood Pressure's Check	√	√	√	√
HBA1C's Check	-	√	-	-
Rapid Reverral Drug Services	√	√	√	√
Monitoring Health Status Routinely	√	√	√	√
Home visit	√	√	-	-
Club's Forming	√	√	-	-
Health Education	√	√	√	√
Doing Exercise Together	√	√	-	-
Reminder	√	√	√	√

Some activities have not run optimally due to internal and external factors in the PROLANIS program, such as in the formation of a club, where,

because of the the constraints of a busy doctor, participants not willing to be involved, or there is no location to gather (Assupina, Misnaniarti and Rahmiwati, 2013).

In terms of membership, the PROLANIS program, especially for type 2 diabetes mellitus, increased participants from the original 263 to 285 participants (Assupina, Misnaniarti and Rahmiwati, 2013). Related to monitoring and evaluation, this has been going well wherein the reporting from family doctors to PT. ASKES Palembang branch and regional branch is always on time (Assupina, Misnaniarti and Rahmiwati, 2013). The provider in this case is PT. ASKES which also routinely monitors family doctors (Assupina, Misnaniarti and Rahmiwati, 2013).

In the research article *The Integration of Preventative Program Disease Diabetes Mellitus Type 2 PT. Askes (Persero) to the Badan Penyelenggara Jaminan Nasional Kesehatan (BPJS Kesehatan)*, Idris (2014) explained that membership of the PROLANIS program has increased rapidly, but the sustainability is very low (Idros, 2014). Based on membership data in the PROLANIS program 2010-2013 period, PROLANIS for type 2 diabetes mellitus had 311 participants in January and 1702 participants in December.2 In 2011, there was an increase of 3122 participants (Idris, 2014). In 2012, there was a rapid increase, in which participants reached 96,897 participants (Idris, 2014). In 2013, membership increased to 100,302 participants (Idris, 2014). However, the participation of high PROLANIS programs is not accompanied by good program sustainability. PROLANIS program visit rate is very low and always decreases every year (Idris, 2014). In 2010, from the 311 participants in January, participants who visited for the PROLANIS program were just 187 participants or only 60.13% (Idris, 2014). In 2012, from 96,897 participants, those who visited were only 3,515 participants or just 3.63% (Idris, 2014).

From the other aspect, the level of health of participants experiences fluctuations (Idris, 2014) whereby there is an increase in the examination of the achievement of fasting blood glucose examination target (in 2010 by 10% to 16.9% in 2012), post-prandial blood glucose (in 2010 by 13.3% to 23.2% in 2012), and body mass index (2010 to 26.7% to 32% in 2012) (Idris, 2014). On HbA1C examination, there was a drastic reduction in the achievement of targets, from 62.1% in 2010 to 1.2% in 2012 (Idris, 2014). Below is a graph of achievement targets related to the health level

examination of PROLANIS program participants in 2010-2012.

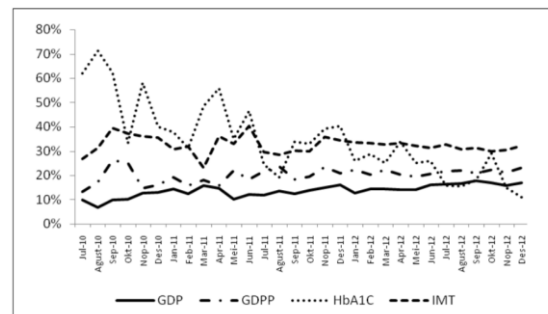


Figure 2: Graph of Achievement of Target Related Inspection of Health Level Participants PROLANIS Program Year 2010-2012 (Idris, 2014).

In terms of cost, once tested, the correlation is found that the more participants visit the PROLANIS program, the lower the costs to be incurred in the hospital (Idris, 2014). As for the effectiveness of PROLANIS program itself, after the correlation is tested it is seen that the reduction of costs to be incurred in the hospital due to effective PROLANIS program occurs after 2-3 years of implementation of the PROLANIS program (Idris, 2014).

#### 4 DISCUSSION

PROLANIS is a chronic disease control program organized by BPJS. The PROLANIS program has the purpose of encouraging JKN participants who have chronic diseases, in this case type 2 diabetes mellitus and hypertension, to have a good quality of life (BPJS, 2015). The goal is measured by 75% of participants who visit first level fasces and have good results in specific examinations according to clinical guidance of the program PROLANIS (BPJS, 2015). In the PROLANIS program there are several activities: 1) consultation/ educational activities, 2) home visit, 3) reminder, 4) club activity, and 5) health status monitoring (BPJS, 2015). Consultation activities are conducted on the basis of the agreement of participants with primary healthcare (BPJS, 2015). In this case, it is expected that a minimum of primary healthcare is the forming of one club/ group for education to be implemented (BPJS, 2015). The reminder activity is an activity to remind the related participants of the consultation schedule to the first level fasces that he chooses (BPJS, 2015). The home visit activity is a visit to the participant's home to provide self-health and environment-related education to the participants

and their families (BPJS, 2015). Home visit activities are conducted when new participants are registered, absent for three consecutive times, physical examination is not good, and post-hospitalization (BPJS, 2015).

From the BPJS, especially the primary service management department, there has been no publication on the Internet related to the monitoring and evaluation of the PROLANIS program, so not everyone knows the effectiveness of the PROLANIS program. However, in the several scientific journals discussing the effectiveness of the PROLANIS program, it is considered that the PROLANIS program has not been run properly. This is evident in the lack of some activities, such as the formation of clubs for education and other group activities (Assupina, Misnaniarti and Rahmiwati, 2013). In addition, the rapidly increasing membership of PROLANIS programs is not followed by the continuity of participants in following the activities of the PROLANIS program (Idris, 2014).

According to research by Swastini, D.A, Putri S.A, Rudiarta N.M, Wiryanthini I.A.D (2016), patient with hypertension which using JKN, diastolic blood pressure decreased significantly. The patient do outpatient treatment in hospital around six month with the help of JKN. Another literature study by Della P.S, Mirtha T.L (2016), noted there's connection between the successes of blood pressure control with health insurance participation. Patient who don't have health insurance increase the risk of uncontrolled blood pressure. With health insurance which one of them are JKN, patient can get treatment to control their blood pressure and prevent complication without worried about high cost.

Of the various problems, the BPJS, especially the primary service management department, should make efforts of continuity so that participants who have signed up always follow the activities on the PROLANIS program. Such endeavours are not necessarily by devising new endeavours, but can also utilize old efforts through reminders. In addition to SMS, reminders may also be done through social media on the Internet owned by participants. In this modern era, people have started to become Internet literate and utilize it effectively. Social media on the Internet that may be used include the LINE application, WhatsApp, etc. Another possible effort is to add facilities and facilities for optimizing activities. As with educational activities, it is possible for participants to be given a snack so that participants are happy and interested to participate, or to also provide games or role-play so that participants do not get bored with the education provided. Maintaining the continuity of participants in following the various activities in PROLANIS program, especially related to controlling patient

with type 2 diabetes mellitus, will impact on improving the quality of the program.

## 5 CONCLUSIONS

PROLANIS is an effort undertaken by BPJS to control chronic diseases, which, in this case, is type 2 diabetes mellitus. There is no publication by BPJS on the Internet related to the monitoring and evaluation of the PROLANIS program. However, there are several scientific journals that have examined the effectiveness of PROLANIS programs. From these journals, it was found out that the PROLANIS program is able to improve health examination to be better, but it is not balanced with the continuity of activities and low participated on the PROLANIS program. It is necessary to keep participants in the activities of PROLANIS programs, such as by reminding through social media on the Internet or add some facilities such as snacks or games and doing role-play so that participants are interested to continue to follow the activities in PROLANIS program, especially related to diabetes mellitus type 2.

## REFERENCES

- Assupina, M. Misnaniarti and Rahmiwati, A. 2013. Analisis Implementasi Program Pengelolaan Penyakit Kronis (PROLANIS) pada Dokter Keluarga PT ASKES di Kota Palembang Tahun. *Jurnal Imu Kesehatan Masyarakat*, 4(3), pp. 256-258. [online] Available from: <http://www.jikm.unsri.ac.id/index.php/jikm/article/viewFile/293/pdf> (Accessed: Sep 03 2017)
- Badan Penyelenggaran Jaminan Sosial (BPJS). 2015. Panduan Praktis PROLANIS (Program Pengelolaan Penyakit Kronis) SlideShare.18 p. [online] Available from: <https://www.slideshare.net/bpjskesehatan1/buku-panduan-praktis-bpjs-kesehatan-prolanis> (Accessed: Sep 03 2017).
- Della P.S, and Mirtha T.L. 2016. Pengaruh Keikutsertaan Pasien pada Program Jaminan Kesehatan terhadap Keberhasilan Kontrol Tekanan Darah pada Penderita Hipertensi. *Jurnal eJKI*, 4(2), pp. 125-129. [online] Available from: <http://journal.ui.ac.id/index.php/eJKI/article/download/6289/3710>
- Idris, F. 2014. Pengintegrasian Program Preventif Penyakit Diabetes Mellitus Tipe 2 PT. Askes (Persero) ke Badan Penyelenggara Jaminan Sosial Kesehatan (BPJS Kesehatan). *Jurnal Indonesia Medical Association*, 64(3), pp. 117-118. [online] Available from:

[http://eprints.unsri.ac.id/5313/1/Pengintegrasian\\_Program\\_Preventif.pdf](http://eprints.unsri.ac.id/5313/1/Pengintegrasian_Program_Preventif.pdf) (Accessed: Sep 03 2017).

Swastini, D.A, Putri S.A, Rudiarta N.M, Wiryanthini I.A.D. 2016. Gambaran Terapi Layanan JKN pada Pasien Hipertensi Stage I dan Diabetes Mellitus Tipe 2 di Unit Rawat Jalan Rumah Sakit Udayana. *Jurnal Farmasi Udayana*, 5(1), pp. 33-39. [online] Available from:

<http://download.portalgaruda.org/article.php?article=457803&val=961&title=gambaran%20terapi%20layanan%20jkn%20pada%20pasien%20hipertensi%20stage%20i%20dan%20diabetes%20mellitus%20tipe%202%20di%20unit%20rawat%20jalan%20rumah%20sakit%20udayana>

