

Analysis of Implementation Chronic Disease Program (PROLANIS) During Pandemic COVID-19 on Primary Health Care

Anna Tirawani Ambarita, Atik Nurwahyuni

Fakultas Kesehatan Masyarakat, Universitas Indonesia, Indonesia

Corresponding author: Anna Ambarita, e-mail: anna.tirawani@office.ui.ac.id

Co-author: A.N e-mail: atikn.akk@gmail.com

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Abstract

The PROLANIS program is a health program initiated by BPJS Kesehatan to prevent diabetes mellitus and hypertension complications. According to Riskesdas data, in 2018, there were 1,017,290 people with diabetes mellitus and 658,201 people with hypertension in Indonesia. This research method is qualitative, and the data collection technique uses in-depth interviews with five types of informants and secondary data observations, namely the coverage of active participants and the number of primary health care employees. There are five types of informants: the head of the primary health care, the doctor in charge, the PROLANIS officer at the primary health care, the BPJS Kesehatan officer, and the PROLANIS participant. The target number of PROLANIS controlled before the pandemic was not achieved. The COVID-19 pandemic conditions increasingly made the target number of PROLANIS participants increasingly unattainable because several PROLANIS activities involved not being implemented. Participants fostered in clubs are limited and selected according to the participants' commitment to participating in PROLANIS activities. Primary health care is expected to carry out innovations so that PROLANIS activities can be carried out in other forms that reduce but still control the health status of the trained participants

Keywords: Hypertension; Diabetes Mellitus; PROLANIS; Mekar Wangi Primary Health Care

Introduction

Non-Communicable Disease (NCD) is a disease that kills 38 million people every year. As many as 28 million people (75%) of the victims came from countries with middle and low incomes. Various studies show a tendency to increase the prevalence of type 2 Diabetes Mellitus in multiple parts of the world (Kumullah & Chotimah, 2021).

In 2019, around 463 million adults aged 20-79 years had diabetes, which is predicted to increase to 700 million by 2045. 79% of adults with diabetes live in low- and middle-income countries. (International Diabetes Federation, 2019) According to RISKESDAS data in 2018, 1,017,290 people with diabetes mellitus in Indonesia and 186,809 people in the West Java area.

Riskesdas 2018 show that the prevalence of diabetes mellitus in Indonesia based on a doctor's diagnosis at the age of 15 years is 2%. This figure shows an increase compared to the prevalence of diabetes mellitus in the population of 15 years in the 2013 Riskesdas results of 1.5%. However, the prevalence of diabetes mellitus, according to the results of blood sugar examination,

increased from 6.9% in 2013 to 8.5% in 2018. This figure shows that only about 25% of people with diabetes know that they have diabetes. (Pusat Data dan Informasi Kementerian Kesehatan, 2020)

High blood pressure is an essential factor for cardiovascular disease and causes 7.5 million deaths per year. RISKESDAS also stated that there were 658,201 people with hypertension in Indonesia and 121,153 people with hypertension in West Java. Riskesdas 2018 show that West Java province occupies the second position with the highest prevalence of hypertension at 44.13%, followed by East Kalimantan. (Pusat Data dan Informasi Kementerian Kesehatan, 2019). Long-term treatment of these chronic diseases certainly takes more time, energy, and costs from various parties. Diabetes prevention should not only be limited to educating healthy people, so they don't get sick. But also includes how so that patient who is already ill with diabetes do not experience complications. Initially, hypertension did not show any more indications in COVID-19 patients. Some data later revealed that the case fatality of COVID-19 was higher in hypertensive patients, although it was not related to age. However, research in the UK has denied the link between hypertension and



the death of COVID-19 patients in hospitals. Although some studies do not show that hypertension is a predictor of COVID-19 severity, hypertension causes a more complex increased risk of COVID-19. The prognosis of patients with hypertension gets worse when COVID-19 infection is complicated by cardiovascular disease. (Renna, 2021)

PROLANIS is a health care system and a proactive approach that is implemented in an integrated manner involving participants, health facilities, and BPJS Kesehatan who suffer from chronic diseases to achieve an optimal quality of life with cost-effective and efficient health services. PROLANIS is a program under of BPJS Kesehatan. The target of this program is all BPJS Kesehatan participants with hypertension and type 2 diabetes mellitus. The legal basis for implementing this program is Law No. 40 of 2004 and Law No. 24 of 2011. (BPJS, 2014)

A previous study on the implementation of PROLANIS at the Tegal Gundil Primary Health Care in Bogor City in 2018 explained that the implementation of PROLANIS was quite good. However, there was still a lack of building facilities and tools for implementing PROLANIS, the lack of coordination of the PROLANIS team, and indicators of success using the active ratio of PROLANIS participants. (Latifah & Maryati, 2018)

The PROLANIS research at the clinic in the BPJS Kesehatan work area of the East Jakarta Branch in 2019 showed that from the input variables seen from the participant's perspective, they had good knowledge about PROLANIS, healthy eating patterns, exercise rules, rules for taking medication and routine checks on participants who diligent visit. Then from the clinical side, human resources at the clinic have good knowledge of PROLANIS, appropriate competence, and a sufficient number of officers. In the planning part of the process variable, the clinic still needs to improve in recruiting participants, especially those who have not reached 10% of the total number of participants, and on the output variable, the overall health condition of the participants shows improvement but is still far from the PROLANIS goal, namely 75% of the participants have good conditions. (Rahma, 2019)

In 2019 the number of people with diabetes mellitus in West Java province reached 848,455 people, and as many as 12,273 people were in Bogor (Dinas Kesehatan, 2019). Until May 2021, there were 321 participants diagnosed with diabetes mellitus and 2,221 participants diagnosed with hypertension in the working area of the Mekar Wangi Primary Health Care. Based on the background described, this study aims to analyze the chronic disease program (PROLANIS) during the COVID-19 pandemic at Primary Health Care X.

Methods

This research was conducted at the Primary Health Care X in May – June 2021. This type of research is qualitative research to understand reality through inductive thinking processes. Data collection methods used are in-depth interviews, observation, and analysis. Sources of data used are primary data and secondary data. Preliminary data includes the results of semi-structured interviews using the guidelines that have been prepared. Secondary data was obtained from document review and recording of PROLANIS activities. Data validity uses source triangulation, method triangulation, and data triangulation.

The selection of informants used the principles of suitability and adequacy. The informants of this study were selected based on the following criteria: PROLANIS makers/holders/supervisors who were involved in implementing and knowing PROLANIS activities and became informants. For informants of PROLANIS participants at the puskesmas, they were determined randomly based on the registered participants. In this study, the researcher asked for the participation of prospective informants by explaining the purpose of the research and their willingness to fill out informed consent. The types of research informants were five people, namely the head of the primary health care (1 person), the doctor in charge of PROLANIS (1 person), a person in charge (1 person), BPJS Kesehatan employee (1 person) and PROLANIS participants with a diagnosis of Diabetes Mellitus and Hypertension (4 people).

Qualitative data analysis is related to data reduction, categorization, synthesis, and working hypotheses. In this study, data reduction was carried out by coding, arranging them into categories, and summarizing to be more straightforward—furthermore, categorization by the homogeneous grouping of data and synthesizing by linking one information data to another. Moreover, the research results will be presented in a matrix and narrative. The researcher added quotations from the informants' statements in the original form for the research results to be detailed, objective, and neutral.

The factors studied in the context are PROLANIS, environment, and targets. In the background, it is intended that conditions that affect the implementation of PROLANIS activities effectively with the target of all BPJS Kesehatan participants with diabetes mellitus and hypertension. The input factors studied were planning, human resources, facilities, and funds. The planning in question is the process of planning PROLANIS activities, the facilities needed to implement PROLANIS, and the allocation of funds to carry out PROLANIS activities. In the process, the factors studied were implementing medical consultation activities, group education, home visits, and

reminders. In the results of the activities, the factors analyzed were the coverage of PROLANIS participants during the COVID-19 pandemic, the number of active PROLANIS participants, the number of home visits, and the health status PROLANIS participants.

Results

Information Characteristic

Table 1. Characteristics of Research Informants

Information	Gender	Age	Qualification	Position
A1	Female	42 years old	Doctor	Head of primary health care
A2	Female	45 years old	Doctor	Doctor in charge
A3	Female	39 years old	Nurse	Person in charge
A4	Female	30 years old	Nurse	BPJS Kesehatan employee
A5	Female	55 years old	Senior high school	PROLANIS participant
A5	Female	67 years old	Senior high school	PROLANIS participant
A5	Female	54 years old	Senior high school	PROLANIS participant
A6	Male	51 years old	Senior high school	PROLANIS participant

Source: *Primary Data, 2021*

Context

The context includes the goals of PROLANIS, the environment that influences the implementation of PROLANIS, and the goals of PROLANIS. According to the informant, PROLANIS is a BPJS Kesehatan program that aims to manage participants with chronic diseases, namely diabetes mellitus, and hypertension, to control their health status. PROLANIS seeks to ensure that the National Health Insurance (JKN) participants who suffer from diabetes mellitus and hypertension do not experience complications.

The environment affects the activity of participants to take part in PROLANIS activities, including economic factors and the COVID-19 pandemic. There is a change in PROLANIS activities where previously counseling was carried out directly at the primary health care. However, now to reduce crowds, it is done virtually via Zoom, where not all participants have gadgets that support the application.

PROLANIS targets are National Health Insurance participants with active membership status who suffer from diabetes mellitus and hypertension. At the Mekar Wangi Primary Health Care, 467 people with diabetes mellitus and 256 people with hypertension. Of all these participants, 1 PROLANIS club was formed, initially numbering 40 people. However, in this club, many participants were unable to commit to participating in all PROLANIS activities, so the club was disbanded, and 25 people were re-formed. The selection of

PROLANIS participants is made by interviewing the

This study involved 8 (eight) informants who were considered capable of representing the object of the problem in the study. The informants for the head of the primary health care and the doctor in charge of PROLANIS have a general medical background, the officer in charge of PROLANIS at the primary health care has a master's degree in nursing, BPJS Kesehatan employee has a bachelor's degree in nursing education, and PROLANIS participants have a high school education background.

doctor in charge and the participants by agreeing on the PROLANIS schedule.

Service Commitment-Based Capitation Supervision, where one of the indicators is the controlled ratio of PROLANIS participants, makes primary health care choose people who are willing to commit. Officers feel they know how many patients to recruit, but they don't have to be compelled entirely, as long as they have reached their comfort zone. (Meiriana et al., 2018).

Input

In this research, the inputs in question are PROLANIS planning, Human Resources (HR), facilities, and funds. Regarding the planning of PROLANIS, informant A1 explained that the implementation of PROLANIS follows the Plan of Action (POA) from BPJS Health in the form of performance targets, where PROLANIS is included in the Non-Communicable Diseases (PTM) program. Regarding the answers of informants A1, informants A2 and informants A3 added that after receiving performance targets from BPJS, at the primary health care level, planning was carried out in the form of activity targets, such as a schedule for participant health checks which were carried out once a month, every Thursday in the first week.

For the doctor in charge and the officer in charge of the primary health care, it is considered sufficient with one person each. Besides that, at the Mekar Wangi primary health care, one administrative officer is also assisted in entering PROLANIS claims. At BPJS Kesehatan, the PROLANIS program is under the responsibility of the promotive and preventive staff.

This is to research (Latifah & Maryati, 2018) that the number of officers is sufficient even though sometimes there are not enough health workers on duty.

The facilities used for PROLANIS services use non-communicable disease program equipment because diabetes mellitus and hypertension are non-communicable diseases. The facilities are considered complete, such as a stethoscope, sphygmomanometer, and speakers for exercise. A medical consultation room is also available, but the room has not been designated and is still shared with other polyclinics. Apart from being in the room during the pandemic, medical consultations are also conducted through interactive Whatsapp groups.

The funds used in the implementation of PROLANIS come from two sources, namely Health Operational Costs (BOK) and claims funds from BPJS Kesehatan. Currently, 70% of the BOK funds are used for the non-communicable disease program and other programs because 30% is allocated for the COVID-19 handling program. Informant A4 explained that the funding for the PROLANIS Program is included in the capitation component. However, club activities such as resource fees, gym instructor fees, and blood sugar checks are included in indirect costs whose payments are reimbursement.

"It is included in the outpatient capitation component. However, there is self-funding outside of capitation". (A4)

"Funding comes from BPJS Health based on the claims submitted, namely the honorarium for the gymnastics instructor and the cost of gymnastics. Inadequate gymnastics costs constrain it because a nominal amount is given, so the officers adjust the adequacy of funds to the participants." (A3).

Process

The scope of the process includes implementation (medical consultation, group/club education, home visits, and reminders) and supervision. According to informants A1, A2, A3, during the COVID-19 pandemic, the activities that can be carried out are medical consultations, group/club education, and reminders. Home visits are canceled. Medical consultation activities are held once a month, every Thursday in the first week. In practice, participants in one club are divided into several visiting times to reduce crowds. During the medical consultation, the doctor in charge will provide the participant's diet plan and adjust the length of sleep that is adapted to the participant's diabetes and hypertension. After the medical consultation, the PROLANIS participant will be given medication for the next month.

"Before the pandemic, the activities were in medical consultations, health checks, and health checks. After Pandemic only carried out medical consultations." (A2)

Before the pandemic, group/club education activities were in the form of gymnastics and counseling. However, because they caused crowds, group education was only carried out in the form of counseling using zoom media. This change also has drawbacks because PROLANIS participants, generally elderly, are constrained by using zoom.

Before the COVID-19 pandemic, home visit activities were prioritized for participants who were not actively visiting, but since the COVID-19 pandemic, home visit activities have been limited. According to informant A1, home visit activities are limited to participants who have disabilities, and have difficulty accessing primary health care because there is no one to take them, and those who have mental disorders.

"During the pandemic, no home visits were carried out because to reduce transmission." (A1)

"No, it's a home visit during a pandemic because we're preventing the spread of COVID." (A2)

"We are advised not to do home visits during the pandemic to reduce physical contact instead there are JKN mobile facilities that can be used." (A4)

Reminder activities are still carried out online and offline. Online reminder activities are carried out through the WhatsApp group. The things that are reminded are the schedule for each person's medical consultation. Those who cannot attend will be rescheduled. Administrative officers carry out reminders. Offline reminders it is done by visiting participants who are not in the WhatsApp group and live around primary health care.

For supervision at primary health care, activities are monitored through mini-workshops or monthly workshops. This activity describes the obstacles to activities and the efforts made for the next planning. From the BPJS Kesehatan side, the supervision of activities is seen through the active participation of participants in PROLANIS activities and the number of participants with controlled diabetes and hypertension. This figure is obtained from the health checks inputted by primary health care officers through the BPJS Kesehatan p-care application. The target achievement figures for primary health care are sent periodically by BPJS Kesehatan officers to the head of primary health care for follow-up.

"There are monthly workshops and workshops to evaluate PROLANIS activities." (A1)

"The head of primary health care carries out

monitoring through a PROLANIS meeting with BPJS." (A4)

Obstacles in the implementation of activities, namely the compliance and commitment of participants in participating in all PROLANIS activities, access constraints because there is no one to take them to the primary health care and the obstacle is not being able to use zoom, the division of work from home for direct health care employees causes limited activity schedules, frequent mutations of head of primary health care and doctor rotation the person in charge and the person in charge causes new officers to have to learn from the beginning about the PROLANIS program, the change in the Performance-Based Capitation indicator that targets from active participants to controlled participants causes errors in entering participant status in PROLANIS, differences in perceptions of controlled health status between BPJS Kesehatan with the primary health care where BPJS Kesehatan is guided by the consensus results of PERKENI and PERHI and the primary health care considers participants to be under control if they do not cause complications.

Product

The product scope includes the coverage of PROLANIS participants, the number of active PROLANIS participants, the number of visits by PROLANIS participants, and the health status of PROLANIS participants at the Mekar Wangi primary health care from April 2020 – to June 2021.

The target of controlled PROLANIS participants is 5-10% of the number of participants who make visits. According to informant A1 during the COVID-19 pandemic, only about 1% of participants whose health status was controlled.

Informant A3 said that before the pandemic, the PROLANIS target of 5-10% had not been achieved. The pandemic conditions increasingly caused the controlled PROLANIS target to be increasingly unattainable. This is, the explanation of informant A4 where there is no change in PROLANIS' achievement targets during the COVID-19 pandemic. This makes it difficult for primary health care to recruit participants.

Table 2. Achievements of KBK PROLANIS at Mekarwangi Primary health care before the Pandemic in January 2019 – March 2020

Month	Prolanis Participant		Visit		Restrained			
	DM	HT	DM	HT	DM	HT		
Jan-19	15	26	8	22	<i>The data is not accommodated by the system</i>			
Feb-19	16	27	10	22				
Mar-19	16	27	10	22				
Apr-19	16	28	10	23				
May-19	16	28	8	22				
Jun-19	17	27	7	24				
Jul-19	17	28	12	23				
Aug-19	17	28	11	23				
Sep-19	18	28	12	23				
Oct-19	19	28	12	24				
Nov-19	20	28	18	24			0	0
Dec-19	17	28	15	24			0	0
Jan-20	17	28	12	20			0	2
Feb-20	17	26	12	16	0	5		
Mar-20	17	26	7	16	0	2		

Source: *Primary data, 2021*

The following table explains that since April 2020, the ratio of controlled PROLANIS participants at the Mekar Wangi primary health care has never reached the target. The needs to increase patient compliance and patient knowledge. One of the best ways is the need to reactivate home visit activities to monitor the health of participants who are afraid to access health services and improve the quality of health facilities. The quality of a health facility can be seen in the services provided.

Table 3. Achievements of KBK PROLANIS Primary health care Mekarwangi after the April 2020 – June 2021 Pandemic

Month	PROLANIS participant		Restrained		Restrained ratio
	DM	HT	DM	HT	
April 2020	17	26	0	0	0,00
Mei 2020	17	26	0	0	0,00
Juni 2020	18	26	0	1	0,02
Juli 2020	18	27	0	0	0,00
Agustus 2020	18	27	0	1	0,02
September 2020	18	27	0	2	0,05



Oktober 2020	17	28	0	0	0,00
November 2020	16	28	0	0	0,00
Desember 2020	17	28	0	0	0,00
Januari 2021	17	29	0	0	0,00
Februari 2021	18	28	0	2	0,05
Maret 2021	18	28	0	7	0,16
April 2021	18	28	0	6	0,14
Mei 2021	18	27	0	3	0,07

Source: *BPJS Kesehatan Bogor, 2021*

Monitoring is needed to avoid complications. On physical examination, it is necessary to check vital signs, including pulse, blood pressure, temperature, and respiratory rate. For monitoring blood sugar levels, the glycemic target depends on the individual condition of the participants, which is seen by age, duration of diabetes, risk of severe hypoglycemia, presence of cardiovascular disease, and life expectancy.

Discussion

Based on the results of interviews, it was found that currently, PROLANIS activities are mostly shifted online, thus requiring media such as cellphones and data packages. At the same time, the income of PROLANIS participants during the pandemic has decreased, so economic factors also affect the activity of participants in participating in activities at PROLANIS, on the other hand. The activeness of PROLANIS participants is also based on the knowledge and ability of PROLANIS participants to use virtual media in carrying out online PROLANIS activities. In addition, it can be seen from the results of the interviews, which showed that the participants did not know much about PROLANIS, did not know the purpose, and even some informants said that they had never heard the word PROLANIS or were foreign to them.

A lack of staff can also affect the program monitoring process. Similar research was conducted at the Jatinangor sub-district health center that in the medical record, the patient's blood sugar recording was incomplete and not continuous. Improper data collection can be caused by three factors: doctors, patients, and health facilities. (Raraswati et al., 2018). According to existing research, monitoring blood sugar levels that are not good will leads to poor glycemic control in patients. (Soetedjo et al., 2018)

The availability of facilities and infrastructure is the most critical factor in achieving capitation indicators based on service commitment. Insufficient or unavailable facilities and infrastructure mean that activities cannot run optimally. Otherwise the available facilities and infrastructure will be an attraction to attract patients to participate in PROLANIS activities. (Afrilla et al., 2020)

Research at the Lawanggantung primary health care

found that the implementation of PROLANIS was sourced from the BPJS Kesehatan with a reimbursement system. Every month the primary health care submits a report on the implementation of PROLANIS to BPJS Kesehatan Bogor and claims funds for the implementation of PROLANIS. The amount of the budget for each activity has also been determined by the BPJS Kesehatan Bogor. There is no difference in financial resources for the implementation of PROLANIS. (Isnadia et al., 2021) In another study at the Sako Palembang primary health care, the coverage of PROLANIS at the primary health care was not maximized due to limited funds. Due to limited funds, some activities could no longer be carried out, one of which was PROLANIS gymnastics which was held once a week. (Firdaus & Idris, 2018)

Anxiety, stress, mood swings, panic, anger, and depression have been observed in the general population, especially among the elderly. Confinement while at home and social distancing restrictions have made the elderly more vulnerable to several physical diseases such as hypertension, diabetes, respiratory disease, weakness, risk of falls and dementia, and changes in mental status such as fear, anxiety disorders, psychotic disorders, cognitive disorders, or decrease and even lead to post-traumatic disorders. (Rahman & Boy, 2020)

Regarding the implementation of PROLANIS, in contrast to research at PLK Unair, PROLANIS is influenced by the suitability of the schedule and time variables owned by PROLANIS participants. As many as 50% of participants stated that the PROLANIS activity schedule was not following their plan, ranging from work schedules, activities in the RT/RW environment, or routine family agendas. (Arifa, 2018)

Regarding human resources, previous research at the Jets primary health care in Yogyakarta stated that there were differences of opinion about the training and HR of Prolanis by the Head of the Primary Health Care Section who mentioned training from BPJS. On the other hand, the head of the non-communicable disease section stated that the movement was carried out by the provincial government, while the director of the *Puskesmas* indicated that there was no training, and the movement for PROLANIS program managers was at their own expense. This, must be a shared concentration so that PROLANIS management can be better improve the health status of chronic disease participants. (Meiriana et al., 2018)

The output of the study at the Jakarta Pusat primary health care showed that patients with non-adherence had a lower increase in FBG, an increase was observed in 16 patients (7.5%), and 60 patients (28.17%) had worsening FBG. There is a relationship between the level of adherence of control PROLANIS patients and

non-PROLANIS patients with clinical outcomes with a p-value of 0.0000 in both GDP and GDPP participants. (Manninda et al., 2021)

In addition to PROLANIS, the health ministry has a CERDIK program to control non-communicable diseases. This program involves puskesmas, district health offices, and provincial health offices. The CERDIK program is included in the regional minimum service standards. This program is implemented at PTM Posbindu. The activities carried out are early detection of non-communicable disease risks, monitoring of sufferers, and counseling. For participants who are not at risk, regular monitoring is carried out, while those at risk are referred to a health facility. During the implementation of the CERDIK program, PROLANIS is also related, especially in the recording section. (Kementerian Kesehatan RI, 2018)

The impact of the PROLANIS program, one of which is exercise, is to reduce blood pressure in people with hypertension. The implementation of PROLANIS exercise that is done regularly provides positive benefits for the body of people with chronic diseases, especially hypertension. Blood flow throughout the body becomes smoother due to increased cardiac output. As a result, there will be an increase in the efficiency of the work of the heart. Taking oxygen from the lungs to carry out the body's metabolism can also run more optimally. Activities carried out during PROLANIS exercise can stimulate the parasympathetic and sympathetic nerves. Nerve activity parasympathetic will increase. Otherwise the work of the sympathetic nerves will decrease. This situation results in a decrease in the hormones norepinephrine, catecholamines, and adrenaline which will affect vascular vasodilation. The changes that occur in the body will further improve the work of the circulatory system that delivers oxygen throughout body parts so that blood pressure will decrease. (Susiani & Magfiroh, 2020)

Conclusion

The COVID-19 pandemic condition affected the activity of participants participating in PROLANIS activities due to limited communication tools to carry out virtual activities. Before the pandemic, the program's target achievement was still small. During the pandemic, the target achievement was getting smaller, only in the range of 0-1 percent. Inaccurate data input techniques in p-care also affected performance achievement.

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Author Contribution and Competing Interest

Anna Tirawani performs the data collection process, prepares references, and writes draft articles. Atik Nurwahyuni was added to the reference and discussion section. All authors read and agree to the final paper.

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