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Diabetes Handlers by the DKI Jakarta Government

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Abstrak. Penelitian ini bertujuan untuk mendeskripsikan bagaimana Upaya Penangan Diabetes oleh Pemerintah DKI Jakarta d Tahun 2018-2021. Jenis penelitian yang digunakan adalah deskriptif. Data yang digunakan adalah jenis data primer dan sekunder yang diperoleh penulis melalui hasil akses internet yang berisikan data dan informasi relevan berkaitan dengan penelitian yang dibahas oleh penulis. Adapun hasil penelitian menunjukan bahwa Penanganan Diabetes oleh Pemerintah DKI Jakarta dilakukan secara internal dan External. Secara Internal dengan membentuk POSBINDU PTM dan GERMAS, dan secara Eksternal Melaui Kerjasama dengan Denmark.

Kata kunci: Denmark; DKI Jakarta; Novo Nordisk; Diabetes

Abstract. *This study aims to describe how the Diabetes Handling Efforts by the DKI Jakarta Government in 2018-2021. The type of research used is descriptive. The data used are the types of primary and secondary data obtained by the author through the results of internet access which contains relevant data and information related to the research discussed by the author. The results of the study showed that diabetes management by the DKI Jakarta Government was carried out internally and externally. Internally by forming POSBINDU PTM and GERMAS, and Externally Through Cooperation with Denmark.*

Keywords: *Denmark; DKI Jakarta; Novo Nordisk; Diabetes*

INTRODUCTION

Diabetes is a serious chronic disease that occurs because the pancreas cannot produce enough insulin (the hormone that regulates blood sugar or glucose). Some of the factors that cause this disease are heredity, race or ethnicity, obesity, *metabolic syndrome*, lack of movement, other diseases, age, history of diabetes in pregnancy, infections, stress, and the use of drugs. Diabetes is one of the four priority non-communicable diseases (NCDs) targeted for follow-up by world leaders.

Table 1
Highest Number of Non-Communicable Diseases in The World

Global Deaths	Sum
Heart Disease	31%
Cancer	16%
Chronic Respiratory Diseases	7%
Diabetic Diseases	3%
Diseases do not correct the rest	15%
Infectious Diseases, Pregnant Women, Fetuses, and Malnutrition	20%
Accident	9%

source: processed data

Diabetes is a worldwide concern because it can increase the risk of complications with other diseases such as heart disease, *stroke*, damage to the leg nerves that result in foot ulcers, infections and even amputations, then blindness and kidney failure (Tandra, 2017). Complications resulting from diabetes can also have a huge economic impact both individually and the health sector as a whole. Starting from direct costs such as the cost of treatment and prevention of diabetes, its complications and also indirect costs such as loss of productivity due to illness, disability, lack of quality of life and death. Indonesia is one of the countries with an increasing number of diabetes diseases and ranks 7th in the world based on 2015 data, seen in Table 2 below.

Table 2
The Ten Countries with the Highest Number of Diabetics

No.	Country	Sum
1	China	109.6 million
2	India	69.2 million
3	United States	29.3 million
4	Brazil	14.3 million
5	Russia	12.1 million
6	Mexico	11.5 million
7	Indonesian	10.0 million
8	Egypt	7.8 million
9	Japan	7.2 million
10	Bangladesh	7.1 million

source: processed data

Based on data from Basic Health Research, community-based national-scale research conducted every 5-6 years, it is explained that in 2007 the prevalence of diabetes in Indonesia was 5.7%. In 2013 it was 6.9% and in 2018 it was 8.5%

Table 3
Prevalence of NCDs (%) in Indonesia Based on Riskesdas

No.	Types of NCDs	2007 Amount (%)	2013 Amount (%)	2018 Amount (%)
1	Stroke	15.4 %	12.1 %	10.9 %
2	Hypertension	6.8 %	25.8 %	8.36 %
3	Diabetes	5.7 %	6.9 %	8.5 %
4	Alchemic Heart Disease	5.1 %	1.5 %	1.5 %

source: processed data

Among other provinces in Indonesia, DKI Jakarta occupies the first position as the province with the highest amount of prevalence in 2018.

Table 4
The Ten Provinces with the Highest Number of Diabetes Prevalence

No.	Province	Number of Prevalence Based on Doctor's Diagnosis in the Population >15 Years
1	Jakarta	3.4 %
2	Yogyakarta	3.1 %
3	East Kalimantan	3.1 %
4	North Sulawesi	3.0 %
5	East Java	2.6 %
6	Bangka Belitung	2.5 %
7	Aceh	2.4 %
8	Gorontalo	2.4 %
9	North Kalimantan	2.3 %
10	Banten	2.2 %

source: processed data

Table 4 above shows that in addition to occupying the highest position for diabetics, in 2018, where DKI diabetics have exceeded the national figure of 2% (Riskesda, 2019). There are several factors that influence the high number of diabetics in DKI Jakarta, including: (1) genetic factors, families suffering from diabetes allow subsequent descendants to suffer from diabetes; (2) demographic factors, the higher the number of elderly people, the more diabetics, because in old age there is a decrease in the functioning of body systems; (3) food factors, where the lifestyle is unhealthy by consuming junk food or fast food that is high in carbohydrates, fats; and (4) physical activity factors, namely low mobility, lack of exercise for adults have an effect on poor metabolism.

The problem of diabetes not only affects sufferers both health and economy but also has an impact on the country, based on IDF data in 2017 diabetes cases reached 425 people and spent 727 billion or 17% of the total world health budget (Resyidah, 2020). Similarly, the National Health Insurance (JKN) stated that the funds spent to deal with diabetes amounted to Rp. 1,877 trillion. In line with that, the Social Security Organizing Agency (BPJS) has disbursed funds of Rp. 6.1 million trillion for the treatment of diabetes in 2018, excluding costs for comorbidities or complications due to diabetes (Anindhita, 2019). From the description of the problem above where DKI is ranked first in diabetes cases in Indonesia and has exceeded the number of diabetics, the DKI government considers it necessary to make various efforts to overcome or reduce the increase in diabetes.

METHODS

The author uses a descriptive type of research to analyze the various efforts of the DKI Jakarta Provincial Government in overcoming diabetes in DKI Jakarta The types of data obtained and used are primary and secondary data, namely data derived from various literature in the form of books, reports, *e-books*, newspapers, journals, articles, official websites and internet access related to research. The data collection technique used by the author, namely *library research*, which is to examine internal and external efforts carried out by the DKI Jakarta provincial government in overcoming diabetes mellitus from various references such as *e-books*, books, newspapers, journals, articles, official websites and internet access. Author using qualitative data analysis techniques, that is, the author will analyze and explain the problem based on the data obtained then relate it to the theory used and then draw a conclusion. The efforts made by the DKI Jakarta government are not only internal through policies but also external efforts by cooperating with foreign countries that have been successful and advanced in dealing with diabetes problems.

RESULTS

Internal Efforts through Community Empowerment

a. Revitalization of Public Infrastructure
   In an effort to prevent diabetes, the DKI Jakarta Provincial Government has carried out several revitalizations of public facilities such as sidewalks, parks and sports facilities, this is intended so that people feel comfortable in walking activities, not passive at home, so that it becomes the choice of the community in activities compared to using vehicles. This activity will help the burning of calories in the body. (Ade Indra, 2019)
b. Collaboration of Integrated Coaching Post (POSBINDU) with the Business World
   DKI Jakarta as a province with a level of debit exceeding national standards in 2018, is one of the most crucial problems. Therefore, the DKI Jakarta government then issued a Governor's regulation to overcome non-communicable diseases and one of them was diabetes. The DKI Governor's Regulation number 25 of 2021 contains preventive and promotional efforts with community empowerment to monitor and detect early through the Integrated Development Post (POSBINDU). (Pergub 2021)
   The government through POSBINDU not only involves medical personnel but also then trains elements of the community, community institutions

and organizations, government partner institutions and the business world, one of which is Alfamart, Nutrifood and Alfamidi.

Through promotional and preventive efforts, this program is focused on controlling risk factors that can be changed such as smoking, lack of activity, unhealthy diet, alcohol, stress and an unhealthy environment. Also conduct early detection of risk factors by means of interviews, measurements and examinations and can also be done through health screening at health service facilities in DKI Jakarta. The target of early detection is any individual aged 15 -59 years.

Early detection is carried out at the level of households, education units, office, and public places, by checking virgin sugar, pigeon pressure, interviews and at the same time educating the public.

POSBINDU is then activated to early detect risk factors at the community level, especially households by POSBINDU cadres. In other words, the existence of POSBINDU in each region has received approval by the local government through the decision of the Lurah, where the position of the Lurah carries out institutional development of POSBINDU. Meanwhile, Puskesmas functions to provide technical guidance to POSBINDU.

In institutional development, the Lurah determines decisions for POSBINDU, facilitates the location of implementation, coordinates the results of activities and provides guidance to the community to support POSBINDU activities.

As a technical supervisor, Puskesmas provides training and or debriefing to POSBINDU cadres. In this case, it provides education related to the problem of risk factors. In addition, Puskesmas also conducts analysis of Posbindu activities, handles and provides feedback on referral cases from POSBINDU, and coordinates with various relevant stakeholders.

The role of POSBINDU cadres is to conduct surveys of targets with officers, encourage community groups to come to POSBINDU, visit community homes and report on the results of activities. All early detection activities will be reported regularly to the Puskesmas by POSBINDU cadres, then the Puskesmas will report to the Health Department.

Through community involvement as government cadres in dealing with the problems faced by DKI Jakarta, it is hoped that it can help prevent the number of non-communicable diseases, one of which is diabetes.

2. External Efforts through Cooperation with Novo Nordisk Judging from the number of diabetes prevalence in Indonesia, among other provinces DKI Jakarta occupies as the first province with the largest number of prevalence based on data from Riskesdas in 2018, which is 3.4%. Previously, the DKI Jakarta Provincial Government had handled diabetes through POSBINDU PTM. In additional to internal efforts. The DKI Government is also trying to find other solution to overcome the diabetes problem by cooperating with another country, namely Denmark, though the Novo Nordisk Company. In this chapter, the author will explain how the effort made by the DKI Jakarta Provincial Government and Novo Nordisk in helping diabetes handlers in Jakarta.



source: processed data

Chart 1
Number of Diabetics in 2018 Who Get Standardized Services

Map (Mapping Stage)

On August 24, 2018, Novo Nordisk and the DKI Jakarta Provincial Government signed an MoU on CCD cooperation at City Hall, Central Jakarta. *Vice President* and *General Manager* of Novo Nordisk Indonesia explained that in this program Novo Nordisk assisted the DKI Jakarta Provincial Government in mapping and identifying the main causes of the increasing number of diabetes prevalence rates in DKI Jakarta. In the process of mapping diabetes problems, there are several parties that will be involved, such as the *Indonesian Medical Education and Research Institute*, Faculty of Medicine, University of Indonesia (IMERI FKUI) as a researcher, the Indonesian Endocrinology Association who provides advice and information on diabetes issues and the DKI Jakarta Provincial Health Office collects diabetes surveillance data.

The results of diabetes surveillance data state that the number of diabetes prevalence rates registered in health facilities in DKI Jakarta is only 12,775 out of 250 thousand people who have diabetes with an age of more than 15 years. This shows that only 30% of diabetic patients receive services according to standards and there are also 70% of the 12,775 patients who are registered as diabetes patients with regular treatment, then 9% who participate in chronic disease management programs. In addition, there are around 154 thousand cases of diabetes that have not been found, because some of the people of DKI Jakarta do not realize that they have been exposed to diabetes. This mapping was carried out for one year using a quantitative approach to survey methods to 10 community health center spreads across administrative cities in DKI Jakarta. The persistence of the survey

carried out in this mapping is a guide to increasing the capacity of medical personnel in community health center in providing education on diabetes and blood sugar control. The ten-community health center are community health center Menteng, community health center Tanah Abang, community health center Kelapa Gading, community health center Penjaringan, community health center Tebet, community health center Kebayoran Baru, community health center Cipayung, community health center Matraman, community health center Kebon Jeruk, and community health center Cengkareng.

Five problems were found that caused the increasing prevalence in DKI Jakarta, namely Jakarta is the city with the highest prevalence of diabetes in Indonesia with an increasing number but still not optimally diagnosed; obesity is one of the factors in the high rate of diabetes in DKI Jakarta; the large number of undiagnosed patients is due to the low knowledge and awareness of the public about diabetes; the function of community health center as a basic health service to screen diabetics is still not optimal; and the management that is still not optimal, only about 30% of diabetic patients have reached the target of the glycemic index k. Novo Nordisk, which is supported by the DKI Jakarta Provincial Government, issued a Briefing Book in the form of a bulletin containing information about diabetes in DKI Jakarta and the results of the mapping stage that has been carried out in the CCD Program in DKI Jakarta.

Through this Briefing Book, it can provide information about diabetes as well as direction in carrying out actions or policies in reducing the number of diabetes prevalence rates through the CCD Program. In the Briefing Book that has been issued, there are two focus pillars of action, namely:

1. Early Diagnosis. Through POSBINDU PTM and GERMAS that already exist in Indonesia, this CCD Program is expected to increase the level of diabetes diagnosis in DKI Jakarta by adopting the previous POSBINDU PTM and GERMAS. The aim is to increase POSBINDU PTM activities in university campuses, offices, schools, shopping centers and places of worship.
2. Optimal Control. To improve the expertise of community health center, Novo Nordic will develop a diabetes management briefing at the community health center and provide training for health workers to increase their competition related to diabetes diagnosis and management. Novo Nordisk hopes that this initiative will improve treatment outcomes in patients. The focus is not only on health workers but the program will also ensure support systems such as referrals, treatment availability and pharmaceutical supplies at key care levels work well to support diabetes management.

Act

Furthermore, on August 27, 2019, the DKI Jakarta Provincial Government and Novo Nordisk Indonesia signed the second phase of an agreement, namely the Action Plan in handling diabetes in DKI Jakarta after completing the mapping stage. The collaboration was held at Balairung, Jakarta City Hall which was attended by the Governor of DKI Jakarta Province Anies Baswedan and his staff, Vice President of Novo Nordisk Indonesia Morten Vaupel, and Danish Ambassador to Indonesia H. E. Rasmus Abildgaard Kristensen. This stage of action is carried out as a process of following up on the mapping stage that has been carried out previously.

There are three action plans carried out in this stage, namely:

1. Increase prevention efforts by increasing the diagnosis rate by activating PTM POSBINDU in institutions such as schools, campuses, and offices. It is known that the DKI Jakarta Provincial Health Office held a Gymnastics and Talk Show with the theme "Prevent, Find and Manage Diabetes Early" as well as a free blood sugar test aimed at early detection of diabetes to the academic community of YARSI University on November 14, 2019 through the activity "POSBINDU *Goes to Campus* " which was carried out at the Yarsi University Futsal Field, Cempaka Putih, Central Jakarta. This activity is part of the Early Diagnosis of the CCD Program between the DKI Jakarta Provincial Government and Novo Nordisk Indonesia.
2. Improving the primary care system. Novo Nordisk collaborated with Perkeni and *Steno Diabetes Center* in forming INSPIRE to improve prevention, vigilance, diagnosis, and treatment to internal medicine specialists, general practitioners, nurses, pharmacists, physiotherapists and management teams. This training has been started since 2012 in Indonesia. However, the training only ran until 2015 for the DKI Jakarta area.

   Strengthening the referral system, in DKI Jakarta is by building type D Regional General Hospitals in several areas of DKI Jakarta with the aim of facilitating the process of referral services from community health center that are closer and faster, before patients are referred to type C or B hospitals.

Share Stage

Share the results of the CCD program that is being carried out to inspire other cities in tackling diabetes. Through this CCD Program collaboration, it is hoped that DKI Jakarta can become a model or example for other provinces in Indonesia in overcoming diabetes. The results of the CCD Program in overcoming diabetes in DKI Jakarta were not carried out optimally. However, the number of diabetics who received services according to these standards increased by 63.4% in 2019 and 100% in 2020 based on data from the DKI Jakarta Health

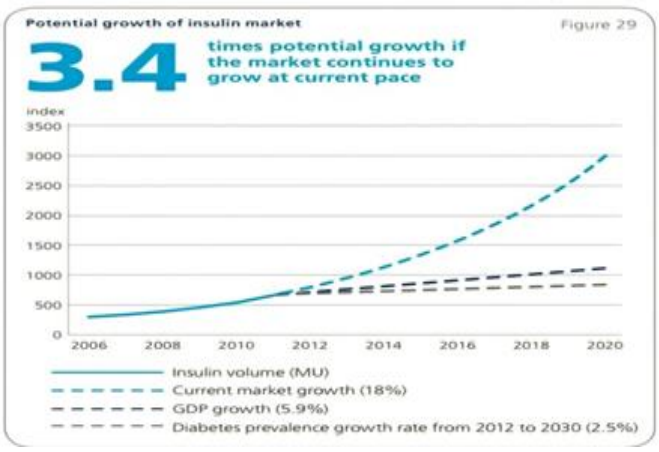
Profile in 2019 and 2020.This is due to efforts to activate POSBINDU in each RW and optimize the referral program to BPJS through coordination of community health center, hospitals, pharmacies, referrals and BPJS in DKI Jakarta.



source: processed data

Graph 1
Number of Diabetics in 2020 Who Get Services According to Standards

Based on the diagram above, diabetics in DKI Jakarta, namely as many as 233,918 people, all of whom have received health services according to standards. Services according to the standards in question are health education and physical activities, medical nutrition services, the provision of pharmacological therapy and also regular laboratory examinations. Although the CCD program collaboration implemented by the DKI Jakarta Provincial Government and Novo Nordisk Indonesia did not run smoothly, through this collaboration both parties also agreed to procure insulin. Where is Novo Nordisk as a provider of insulin product for diabetes treatment, in other words as insulin supplier to DKI Jakarta. The Novo Nordisk insulin market from 2006 to 2020 experienced a rapid increase due to the large demand for insulin every year in Indonesia.



source: processed data

Chart 2
Potential Growth of Novo Nordisk Insulin Market

Novo Nordisk also offers prices that can be reached by the middle and upper-level people and has good quality so that this makes Novo Nordisk a supplier of insulin needs in DKI Jakarta.

CONCLUSION

The cooperation in diabetes management carried out by the DKI Jakarta Provincial government has not been carried out optimally. However. Though this effort, the DKI government was able to find the main factors causing the high rate of diabetes in Jakarta. Among them are obesity problems, patients who are not diagnosed, low knowledge and awareness of diabetes, health service and management that are not optimal. This finding then becomes the next reference for DKI Jakarta in making regulations and determining future preventive actions.

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