



Evaluation of the Non-Communicable Disease Program at the Sawoy Health Center, Jayapura Regency

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ABSTRACT

This study aims to evaluate the implementation of the Non-Communicable Diseases (NCD) program at the Jayapura Regency Health Center. The research uses a qualitative case study design. The number of informants was 9 people who were selected using the purposive sampling technique. Data was collected by in-depth interviews and triangulation of data and sources. The data analysis techniques used include data reduction, data presentation, and conclusions drawn. The results of the study show that the implementation of the NCD is still not optimal. Some of the main obstacles identified include the limited number of health workers, a small allocation of funds, and low public awareness in participating in NCD Posbindu activities. The available facilities are not yet able to reach all villages. In addition, the implementation process is still carried out manually, has not been well structured, and monitoring activities are not carried out regularly. The scope of NCD Posbindu services has not reached the national target and the prevalence of hypertension and diabetes mellitus cases is still high, so the goal of reducing the number of NCD has not been achieved.

INTRODUCTION

Non-communicable diseases are often asymptomatic diseases that cause people to be unaware of the condition since the beginning of the disease journey (Ministry of Health of the Republic of Indonesia, 2012). Non-communicable diseases (NCD) are one of the main causes of the highest mortality in the world (Trisnowati, 2018). Diabetes mellitus, hypertension, and obesity now dominate morbidity and mortality rates (Ministry of Health, 2019). NCD have a wide impact, so the prevention and control of their risk factors are a top priority in national health policy (Mangonto et al., 2024).

According to data obtained from the Provincial Health Office in 2019, the data on hypertension cases in Papua amounted to 13,068 cases, with the highest cases in Jayapura City with 2850 cases and the lowest in the Pegunungan Bintang 4 cases (Ba'ka et al., 2023). Based on the Healthy my Indonesia (ASIK) application, overall the coverage of early detection for diabetes mellitus in Indonesia reached 46% with 44,207,358 people. With early detection coverage for Papua being 1% (Director of P2NCD, 2024). Type 2 diabetes mellitus and hypertension are risk factors for atherosclerosis lesions associated with dyslipidemia (Nguyen, 2012)

Hypertensive disease has a major impact and can even cause death and disability if not treated immediately (Nurhayati et al., 2022). Likewise, diabetes mellitus factors that have a relationship with the incidence of diabetes mellitus in Indonesia are age factors (86%), genetics (100%), physical activity (87%), diet (100%) and smoking habits (83%) so that people must be more aware of a healthy lifestyle by increasing the intensity of physical activity, regulating diet, both the amount of food with normal frequency (2-3 times a day), type and timing of meals, reducing smoking habits, and checking blood sugar regularly, especially for those who are >45 years old and who have a history of diabetes (Fauziyyah & Utama, 2024)

To reduce the number of non-communicable diseases in Indonesia, in 2010 WHO recommended the implementation of *the Package of Essential Non-communicable* (PEN) for low-middle-income countries. In response to this, the Ministry of Health launched the Integrated Development Post for Non-Communicable Diseases (Posbindu), as part of the PEN. Posbindu is a community-based program for screening and prevention of non-communicable diseases (Journal et al., 2024). The achievement of the implementation of Posbindu in Indonesia has not been maximized because there are still obstacles to the input, process, and output of program implementation (Nugraheni Reny, Richa Chintya, 2022).

The NCD Posbindu program in Jayapura Regency has been implemented in 155 villages/villages (100%) (Source Profile of the Jayapura Regency Health Office, 2024) In the work area of the Sawoy Health Center, consisting of 12 villages/villages, the achievement of the NCD Program at the Sawoy Health Center which is in the working area of the Kemtuk Gresi District in 2024 is still low. Of the 3,287 screening targets, only 440 people (13.4%) were achieved. The target hypertension is 91 people, however, only 4 (8.7%) are affordable. Meanwhile, of the 37 diabetes mellitus targets, only 9 (24.3%) were achieved. Considering that the achievement is still far from the 100% target, this research

needs to be conducted to analyze the causes and a more in-depth study is needed on the implementation of the NCD posbindu in the Sawoy Health Center area.

THEORETICAL REVIEW

Meta Synthesis (Review of Previous Research)

Research on the evaluation of the implementation of NCD posbindu has been conducted by Yunita Irianti Mangonto, Ria Romantir and Antonius at the Harapan Health Center, Jayapura Regency, Papua. Their findings reveal a higher prevalence of NCD, especially among individuals aged 48 years and older, while education levels significantly affect health awareness and behaviors. In particular, individuals with higher levels of education show better knowledge of health risks, but many still experience NCD, which suggests that education alone is not enough. Challenges such as limited funding, inadequate training for health cadres, and low community engagement significantly hamper the effective implementation of the Posbindu program. The discussion emphasized the need to improve health education and active community involvement to maximize the benefits of the Posbindu initiative.

The same research has also been conducted by Ekowati Rahajeng, Enung Nurhotimah in 2020 and they found that the implementation of Posbindu NCD has not been optimal, especially used to monitor the risk of hypertension and diabetes at the age of 35 years and above. The main obstacles include cadre skills, operational funds, and infrastructure. Adolescents have the potential to become cadres, while integration with the Adolescent Health and PIS-PK programs can expand the scope of services.

The same thing was done by Grace Sicilia, Fatwa Sari Tetra Dewi, Retna Siwi Padmawati, in 2018 found that the NCD Posbindu at the Muara Bungo I Health Center has been running since 2015 and grew from 6 to 9 posbindu in 2017. Cadres and community leaders support its sustainability, but there is still a shortage of health workers, an inappropriate understanding of concepts, and limited funds and facilities. Cadres remain active even without training. The public's view that associates examinations with treatment is an obstacle, so that the achievement of visits in 2017 was only 5.7% of the 100% standard.

A study conducted by Agung et al. at Posbindu NCD with an observational analytical approach shows a relationship between the level of knowledge and the utilization of Posbindu services (Agung et al., 2025). Meanwhile, research by Agussella et al. (2023) found no association between age and the use of NCD Posbindu. However, variables such as insurance ownership, income level, and location have been proven to affect the use of NCD Posbindu in programs implemented by the Tulang Bawang Health Office, Lampung (Agussella et al., 2024). In addition, findings from Susanti et al. (2025) show that the role of health workers is significantly related to community compliance in visiting NCD Posbindu, with a significance value of $0.000 < \alpha (0.05)$. The uniqueness of this study lies in the tribal dimension and access to health services, which are contextually relevant in Papua. The Papuan tribe has distinctive cultural characteristics that also influence participation in Posbindu, coupled

with geographical challenges that make it difficult to access health services, thus having a significant impact on the use of Posbindu in the region.

The new findings of this study are that in addition to its new place at the Sawoy Health Center, it is also a qualitative design and also its variables

Frame of Mind

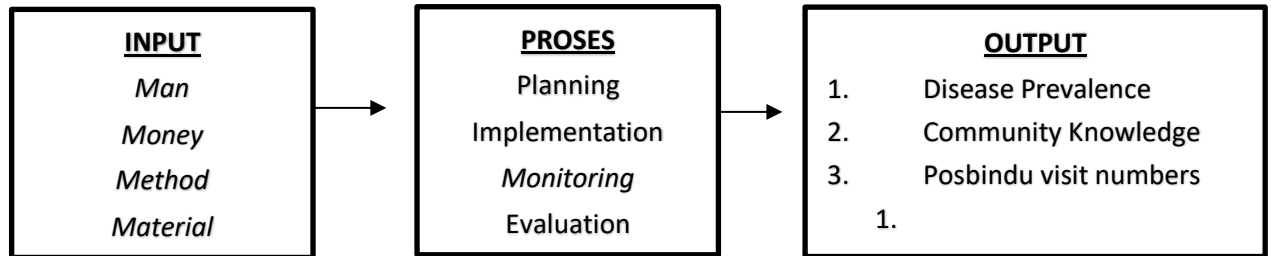


Figure 1. Conceptual Framework

METHODOLOGY

This research uses qualitative research with a case study design. Qualitative research method is a research based on the philosophy of postpositivism used to research the condition of natural objects where the researcher is the key instrument (Hasmi, 2016). The informants in this study were 9 informants who were taken by purposive sampling technique, with the information criteria being to meet and be directly involved in the NCD program at Posbindu and health centers. Data was collected by in-depth interviews and triangulation of sources, data. Thematic data analysis by means of data reduction, presentation and conclusion.

RESEARCH RESULTS

Input on the Evaluation of Non-Communicable Diseases Program

Inputs to the evaluation of the non-communicable disease program at the Sawoy Health Center include human resources, budget, infrastructure and screening equipment. The implementation of the NCD program at the Sawoy Health Center still faces various challenges. Human resources are very limited, only one officer concurrently serves as the person in charge of NCD. Community participation is also still low, especially in the age group of 15–59 years, due to a lack of awareness of the importance of disease prevention. The following is an excerpt of the interview:

"For medical personnel, it is enough, only for the NCD program only one nurse is responsible ("I₁)

"At the Sawoy Health Center, health workers who specialize in handling NCDs are very limited. Usually only 1 person is appointed as the person in charge, that also concurrently another task ("I₂)

"The number of health workers specifically for NCDs is very limited, only 1 person in charge of the NCD program also concurrently holds other duties ("I₄)

The interpretation of the informant's statement is that although the number of medical personnel in general at the Sawoy Health Center is considered sufficient, but specifically for the Non-Communicable Disease Prevention and

Control (NCD) program, health workers are very limited. Only one nurse was appointed as the person in charge of the program, and he also concurrently held other duties outside the NCD program. This indicates that the NCD program has not become a top priority in the placement of human resources, and there is no health worker who is fully focused on the management and implementation of the NCD program.

"For the bok budget in pkm is sufficient, it is just not a priority for the NCD program in 12 villages in pkm sawoy ("I₁)

"To be honest, the budget allocation for NCD is still very minimal. The budget is more directed to other programs such as immunization, KIA, or nutrition programs. For NCD, we often have to be creative in combining activities with other programs to keep them running ("I₂)

"The budget for NCD is still very minimal ("I₄)

The informant's statement was interpreted that although the BOK's budget is generally sufficient, the NCD program has not yet become a top priority, especially to reach 12 villages in the work area. The budget allocation for NCDs is considered very minimal compared to other programs such as immunization, KIA, and nutrition. As a result, the implementation of the NCD program often has to be combined with other activities to keep running.

About Facilities and Infrastructure, here is an excerpt of the interview:

"Enough and enough ("I₁)

"Adequate facilities and infrastructure ("I₂)

"It is in good condition and can be used ("I₄)

"It's still very limited."I₅)

"Enough is provided by the health center and the village ("I₆)

The interpretation of the informant's statement that the condition of the facilities and equipment at the Sawoy Health Center is quite adequate and can be used to support NCD activities. However, there are still some views that state that the available facilities and infrastructure are still limited, especially in covering the entire work area of the Health Center consisting of 12 villages.

Process on the Evaluation of Non-Communicable Diseases Program

In the Process component, here are the interview results:

"The planning process has not been carried out systematically ("I₁)

"Actual planning is made at the beginning of each year through internal meetings ("I₂)

"Usually we will have a meeting or meeting and then talk about important things related to planning ("I₄)

Based on the results of the interview, it can be concluded that the planning, recording, reporting, evaluation, and monitoring of the NCD program at the Sawoy Health Center still faces various obstacles that hinder its effectiveness and efficiency. The planning process has not been carried out in a systematic and structured manner, although internal meetings are held at the beginning of each year to plan the program. However, the planning is more discussional and lacks a standard and directed procedure.

In terms of recording and reporting, this process is also not efficient because there is no special administrative staff to manage NCD data. As a result,

recording is still handled by medical staff who also have responsibilities in direct service. Technical constraints, such as network issues and additional workloads, also worsen the effectiveness of reporting.

In addition, the evaluation and monitoring activities of the NCD program have also not gone well. Limited time and manpower are the main factors that hinder the implementation of periodic monitoring in all work areas. Although there are efforts to monitor, the implementation is still not optimal and does not cover the entire work area as a whole. Here is an excerpt of the interview:

"It is still not efficient, because of the limited time and energy that causes monitoring activities to not be carried out periodically in all work areas ("I₁)

"It still hasn't gone well ("I₂)

"It's been running too ("I₄)

The interpretation of the informant's statement is that the reporting, evaluation, and monitoring of the NCD program at the Sawoy Health Center is still not running efficiently. Limited time and energy are the main obstacles that hinder monitoring activities, so monitoring cannot be carried out periodically in all work areas.

Although several monitoring activities have been carried out, as conveyed by the informant, the implementation is still not optimal, and the monitoring program has not run well. Limitations in terms of time and manpower result in lower monitoring effectiveness, which in turn can affect evaluation and decision-making related to NCD programs.

The recording of the Non-Communicable Disease Program at the Sawoy Health Center is as follows:

"For reporting is still not efficient, because there is no special admin staff for the management of NCD data, and reporting still depends on medical staff who also handle direct services ("I₁)

"Sometimes we experience obstacles, such as networks and human resources who are appointed to do it, sometimes there are other jobs ("I₂)

"It is running but not yet effective ("I₄)

The interpretation of the informant's statement is that the recording and reporting of the NCD program at the Sawoy Health Center still faces various obstacles that reduce its efficiency. One of the main problems identified is the lack of special administrative personnel to handle the management of NCD data, so reporting still depends on medical staff who also have direct service duties. This causes a heavy and non-optimal workload in terms of recording NCD data. Technical obstacles such as network problems and incompatibility of HR assignments who have other jobs are also obstacles. Staff appointed to manage NCD data sometimes have to split time with other tasks, which reduces the focus and effectiveness of reporting. Although recording and reporting have been implemented, the process has not reached the desired level of effectiveness due to a lack of supporting resources and technical factors that interfere with the smooth reporting process.

Output on the Evaluation of Non-Communicable Diseases Program

The coverage of the NCD Posbindu in the Non-Communicable Diseases Program at the Sawoy Health Center is still very low

"It is still very lacking, because there is a lack of awareness from the community and human resources are also lacking ("I₁)

"It is still minimal, in my opinion, in my opinion, human resources and the community have not been able to synergize well ("I₂)

"The coverage of Posbindu is still low, only a few percent ("I₄)

The interpretation of the informant's statement is that the coverage of the NCD Posbindu at the Sawoy Health Center is still very low. This is due to two main factors: first, the lack of public awareness about the importance of the Posbindu NCD program, which results in their low participation in these activities. Second, the limited human resources (HR) in the health center, which affects the ability to reach and involve more people in the program.

In addition, coordination between human resources and the community is also still not going well, so the synergy between the two is not optimal. This results in limited program coverage, and although Posbindu already exists, its effectiveness has not been maximized in reaching all targets.

Based on the results of interviews conducted with 3 informants who are the heads of the health centers, the person in charge of NCD at the health center and the head of the planning section related to the prevalence of NCDs carried out by the Sawoy health center, the informant revealed several statements, the following interview excerpts:

" Descending ("I₁)

"Has not shown the expected figures/targets ("I₂)

"There are still several cases every day, but it cannot be said that we have reached the target given ("I₄)

The interpretation of the informant's statement is that the prevalence of NCDs at the Sawoy Health Center shows an inconsistent decrease. Although there has been a decline in some cases, the results have not fully met the expected targets. Some informants noted that despite the decline, there are still some new cases emerging every day, which suggests that despite efforts to reduce the prevalence of NCDs, they have not been effective enough to achieve the targets that have been set. Although there has been some improvement, the achievement in controlling NCDs is still far from expectations. This shows the need for further evaluation of the strategies used, as well as improvements in terms of NCD prevention and management in order to achieve the desired targets.

DISCUSSION

Based on the results of interviews that have been conducted at the Sawoy Health Center, several challenges were found in the implementation of the NCD program. Human resources for this program are limited, community participation in the NCD program is also low, in addition, the budget allocated for the NCD program is still minimal, often combined with other programs to keep running. Although the facilities and infrastructure are adequate, limited human resources and time hinder the implementation of recording, reporting,

and program evaluation. The low coverage of the NCD Posbindu shows that there is still a lack of community participation. The following is a detailed discussion :

Input

Human resources, the NCD program at the Sawoy Health Center faces limitations of health workers who specifically handle NCDs. Although the number of general medical personnel in the health center is sufficient, there is only one nurse appointed as the person in charge of the NCD program, which also concurrently performs other duties. The absence of special personnel who focus entirely on this program certainly affects the effectiveness of its implementation.

This is in line with research conducted by (Fitriah & Haris, 2021) which shows that the organizational capacity of Puskesmas, including human resources, does not always correlate positively with the performance of the NCD program. Although funds and human resources are available, other factors such as facilities and implementation management are more influential in the success of the NCD program.

In addition, there is also a study conducted by (Listya Dewi, 2013) highlighting that the unequal distribution of health workers, especially in remote areas, is the main obstacle in improving access to health services. Health centers in areas with low health workers often have difficulty in running health programs optimally

In terms of budget, although the BOK budget allocation at the Sawoy Health Center is quite adequate overall, the budget for the NCD program is still very limited. The NCD program has not become a top priority compared to other programs such as immunization, KIA, and nutrition. As a result, the implementation of the NCD program often has to be combined with other activities to ensure that the program continues to run.

This is in line with research conducted by (Nugraheni & Hartono, 2018) which revealed that the funding for the NCD Posbindu program is still relatively minimal when compared to other programs. This causes the implementation of the NCD program often to be combined with other activities to ensure that this program continues to run.

In addition to the above research, there is another study conducted by (Amanda et al., 2023) which reveals that in the implementation of Health Operational Assistance (HOA), human resource policies and technical guidelines for program targets in general are inadequate. In addition, the amount of funds needs to be evaluated, and the accountability process requires oversight and simplification of reporting. This shows that the NCD program has not received adequate priority compared to other programs such as immunization and KIA.

Regarding facilities and infrastructure, most of the informants revealed that the condition of the facilities and equipment at the Sawoy Health Center is quite adequate and can be used to support NCD activities. However, there are still some views that state that the available facilities and infrastructure are still limited, especially in covering the entire work area of the Health Center consisting of 12 villages.

This is supported by research conducted by (Sari et al., 2025) which reveals that in terms of human resources, facilities and infrastructure, implementation, recording, and reporting are still not optimal. This indicates that although the facilities and equipment at the Puskesmas are adequate, there are still limitations in reaching the entire work area consisting of several villages.

Although some people already know about NCD screening tools such as blood pressure measurement, blood sugar, height, weight, and abdominal circumference, there are still many who do not fully understand the services available.

This is supported by research conducted by (Hajrah, Wa Ode, Dra. Wartonah, Nur Fitri Ayu Pertiwi, 2024) which states that the training of Posyandu cadres shows that even though the community knows screening tools such as blood pressure and blood sugar measurements, their understanding of the available services is still limited. This training improves the skills of cadres in conducting NCD screening and increases public awareness of the importance of early detection.

Process

In terms of planning, although efforts to compile programs are carried out at the beginning of each year through internal meetings, this process has not been carried out systematically and structured. Planning is more of a discussion without being supported by clear standard procedures, so it has the potential to cause irregularities in the implementation of programs in the field.

This is in line with research conducted by (Ummah, 2019) which shows that the planning of the P2 ISPA program at the Pawnshop Health Center is not made in detail, so it cannot be determined the amount of funds that should be needed for each activity in the program. This indicates that program planning has not been carried out in a systematic and structured manner.

In the recording aspect, it was found that the management of NCD data is still not efficient and effective. One of the main reasons is the unavailability of special administrative personnel to handle recording and reporting. As a result, this task is assigned to medical staff who should be more focused on direct health services. In addition, technical constraints such as unstable internet networks and double workloads also hinder the smooth recording and reporting process.

This research is in line with the research conducted by (Ritonga & Mansuri, 2017) in this study revealed that the implementation of SP2TP at the Rantang Health Center has not been optimal. The obstacles faced include the lack of coordination between SP2TP officers, limited facilities and supporting technology, and the absence of special administrative personnel to handle recording and reporting. As a result, the recording process is still carried out manually and the submission of reports to the Medan City Health Office is often late.

Reporting, evaluation, and monitoring activities on the implementation of the NCD program are also still not optimal. Limited human resources and time cause monitoring to not be carried out periodically in all work areas of the Health

Center, which consists of 12 villages. Despite monitoring efforts, the implementation has not been consistent and effective.

This study shows that the implementation of the NCD program at the Sawoy Health Center has not been optimal. The obstacles faced include the lack of a routine schedule for mobile screening, limited human resources, and low community participation. This causes monitoring and evaluation to not be carried out regularly and effectively. (Nugraheni Reny, Richa Chintya, 2022).

Output

The achievement of NCD Posbindu activities is still relatively low. The low coverage of Posbindu is due to the lack of public awareness to actively participate in screening activities and the limited human resources (HR) involved in the implementation of Posbindu. Coordination between health workers and the community is also not optimal, so the Posbindu program has not been able to reach all the set targets.

This is in line with research conducted by (Suhbah et al., 2019) which shows that even though the distribution of Posbindu NCD reaches 100%, the achievement of health services such as hypertension, diabetes mellitus, and productive age is still below the target. This is due to limited funds, facilities and infrastructure, as well as a lack of training for officers and cadres.

In addition, the lack of thorough planning and routine coordination is also an obstacle in the implementation of the program, the lack of training for officers and cadres causes them to not have adequate competence in running the program. Limited funds and infrastructure facilities hinder the optimal implementation of activities. In addition, the lack of planning and coordination causes the program to not run systematically.

The results of the interviews show that the trend of the prevalence of NCD in the work area of the Sawoy Health Center has not shown stable results. Although there are indications of a decrease in cases for some time, the overall prevalence rate of NCD has not reached the expected target. New cases are still found, which indicates the need for more intensive efforts in prevention, health promotion, and increased coverage of screening and early intervention through the NCD Posbindu

This is in line with research conducted by (Beno et al., 2022) which states that health service achievements such as hypertension (0.60%), diabetes mellitus (48%), and productive age (45.38%) are still below the target due to limited funds, facilities and infrastructure, as well as a lack of training for officers and cadres. In addition, the lack of thorough planning and routine coordination is also an obstacle in the implementation of the program.

The lack of training for officers and cadres causes them to not have adequate competence in running the program. Limited funds and infrastructure facilities hinder the optimal implementation of activities. In addition, the lack of planning and coordination causes the program to not run systematically (Lubis, 2022).

CONCLUSION

1. Input: The number of health workers for the NCD program is still limited so that the implementation is not optimal. The funds for the NCD program are still much smaller than other programs, the facilities are adequate, but they cannot cover all villages in the work area.
2. The process is still manual, unstructured, and monitoring is not carried out regularly.
3. Posbindu services have not met the national target. NCD cases are still found and the target of reducing prevalence has not been achieved.

RECOMMENDATION

1. It is necessary to add special health workers for the NCD program and increase training for existing officers.
2. Increase health education and promotion on the importance of early screening through local media, cadres, and community activities.
3. Propose an increase in the allocation of special funds for NCD in BOK planning and seek support from third parties or CSR.
4. It is necessary to distribute mobile health facilities (mobile health) and optimize village-based Posbindu.

FURTHER STUDY

There is a need for more comprehensive follow-up research on the evaluation of NCD programs with district-level coverage, with larger populations and using a combined design between quantitative and qualitative.

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