



INTERNASIONAL CONFERENCE ON MULTIDISCIPLINARY APPROACHES IN HEALTH SCIENCE

VOLUME 2 , ISSN 3032-4408 (Online)

<https://ejournal.poltekkes-denpasar.ac.id/index.php/icmahs>

Analysis of Policy and Implementation for Non-Communicable Disease Control through the POSBINDU program in Bali

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Article history

Posted : 2024-12-12

Reviewed : 2024-10-29

Received : 2024-10-03

ABSTRACT

Background: NCDs increased from 39.7% to 72.3% in 2019, resulting in increased health costs and mortality. However, in its implementation, NCDs program still experience many challenges, reflected in the data in Bali on 2023 is less than <10%. Objective: To determine how the implementation of POSBINDU NCDs program in Bali. Method: This descriptive study used an integration of primary and semi-quantitative secondary data with qualitative research carried out in three districts according to how well they execute POSBINDU NCDs activities. In-depth interviews, FGD, observations, and documentary research were used to collect the data. Purposive sampling was used to 21 respondents from a variety of sectors within the district. Results: The key challenges of the NCDs program include limited community engagement and human resource issues. Another issue is the budget and costs, policies, and reporting system. The practicality and usability of a health service program have an impact on its effectiveness. Feasibility is the determination of whether a new program can be executed and integrated with current ones. Human resources and community participation are two aspects that must be addressed while assessing feasibility. Usability is an evaluation of the media and tools utilized in an intervention program. Conclusion: The achievement of POSBINDU NCDs services is still far from the target. We recommend increasing public awareness to reduce morbidity and mortality rates, a legal regulation that protects local governments so that they can provide appropriate incentives to cadres, and a reporting system that is integrated with other community empowerment programs.

Keywords: POSBINDU, NCDs, Health policy implementation.

Introduction

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Non-communicable diseases are a global health problem that requires serious handling and joint commitment. There has been a rapid increase in cases of non-communicable diseases in the last three decades. In Indonesia, NCDs absorb the highest health insurance budget for treatment and make the largest contribution to mortality rates globally and to mortality rates in various countries including Indonesia.

Based on Disability life Years (DALYs) Loss, Indonesia is experiencing an epidemiological transition. NCDs increased from 39.7% in 1990 to 72.3% in 2019, resulting in increased health costs and mortality. The cost of treating NCDs took the highest proportion of the National Health Insurance (JKN) fund, which was around 20.27 trillion in 2019. Meanwhile, based on mortality rates, Global Burden Disease 2019 data states that deaths in Indonesia due to NCDs increased by

82% with the largest contribution being heart disease, stroke and diabetes.

The management and control of NCDs are still focused on curative and rehabilitative efforts, not yet leading to promotive and preventive efforts that empower the community. POSBINDU is one form of community participation to reduce NCDs. The implementation of POSBINDU on NCDs is carried out by existing health cadres or several people from each group / organization / institution / workplace who are willing to implement POSBINDU and specially trained, coached, or facilitated to monitor NCD risk factors in each group or organization. However, in its implementation, NCDs prevention and control services still experience many obstacles and challenges, reflected in the data on the achievement of POSBINDU services in Bali Province until August 2023 is still very low (<10%) from the target of 100%. The achievement of NCD

services raises various questions that need to be resolved in order to improve the service outcomes.

Research Method

This is a descriptive study using a mixed method that combines semi-quantitative secondary and primary data in qualitative research. The form of policy analysis that will be carried out is retrospective policy analysis, which explores various information after the policy is taken and implemented or problem-oriented analysis and its application (Dunn, 2003).

The policy analysis approach by using normative and evaluative methods, which is an approach method that focuses on the main problem, to evaluate various health policies and programs related to NCDs and implementation in POSYANDU and activity achievements. Based on this method, a descriptive and normative formulation will be produced to understand policy problems that provide alternative

solutions as a basis for improvement and policy recommendations.

This study was conducted in three cities/districts in Bali. Determination of districts based on consideration of districts which have excellent and problematic POSBINDU NCDs activities, focus on analyzing policies, programs and implementation of NCD control at POSBINDU as part of primary service transformation. The technique of determining research subjects is based on purposive sampling. The subjects of this study were: Position holders at the level of Bali Province and city districts, health workers and cadres of community professional organizations (community leaders, cadres sourced from the community).

The variables collected were NCD policies and programs in Bali, NCD prevention and control programs, implementation of NCD programs in POSBINDU and POSYANDU,



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program achievement targets and realization and community empowerment in government programs. The data collected includes primary and secondary data. Secondary data in the form of quantitative data in the form of regulations and policies, programs, targets and realization of programs, NCD costs were collected through recording in documents and reports at relevant agencies such as the Bali Provincial and district health offices, PMD offices, Puskesmas and other related agencies. Qualitative data was collected through the process of Focus Group Discussions (FGDs) and independent interviews with stakeholders (policy holders, regional and district program holders, and the community) namely the Head of the Bali Provincial Health Office, Head of the Village Government and Community Service Head of the district / city Health Office, program holders at the Provincial and district / city health offices, heads of Puskesmas, health cadres, and community leaders with a triangulation approach method as an effort to check the truth of data and

information obtained by researchers from different perspectives to reduce bias during data collection and data analysis. The data

obtained were processed through the data management process (editing, coding, cleaning). Qualitative data were analyzed through content analysis for policies, programs and evaluation of NCD control programs. Data will be presented descriptively in accordance with the objectives with the final result being recommendations for the development and improvement of activities and programs.

Results and Discussions

The research was conducted in three regencies and cities in the province of Bali that were selected randomly. The selected districts were Denpasar, Gianyar and Badung. Primary data was obtained using in-depth interviews and focus group discussions. Secondary data were obtained from reports and various policy documents related to the Non-Communicable Disease (NCD) control program. Respondents consisted of various sectors in the district and city areas, which were selected by purposive sampling, according to the research needs. Details of respondent characteristics are presented in Table 1.

Table 1 Respondent Characteristics

No	Institution	Position	Number (person)
1	Bali Provincial Health Office	Head of Division P2P Bali Provincial Health Office	1
		Person in Charge of Non-Communicable Disease Program	2
2	District/Municipal Health Office	Person in Charge of Non-Communicable Disease Program District/Municipal Health Office	3
3	Puskesmas	Head of Puskesmas	3
		Person in Charge of Non-Communicable Disease Program	3
4	Village/ Kelurahan	Head of Village/ Head of Affairs/ Secretary of Village	3
5	City/District Civil Service Police Unit	Head of the Investigation and Detection	3



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6	Community and Village Empowerment Office	Village and Kelurahan Analysis	3
	Total		21

Based on the results, six themes were found. The six themes are 1) policies underlying the NCD prevention and control program, 2) Human Resources (HR), 3) Community Participation, 4) Program budget and financing, recording application 5) reporting, and 6) stakeholder desires.

1. Policies underlying the NCD prevention and control program

The policy review in this study was carried out through a process of literature study and interviews with stake holders. There are three policies and regulations that underpin the implementation of the NCD prevention and control program; 1) **Permenkes** No 71 of 2015 concerning the prevention of non-communicable diseases. This regulation about the types of NCD program implementation. Through this regulation, local governments, in coordination with the central government, are obliged to organize NCD prevention and control programs. It stipulates provisions on diseases classified as NCDs, technical countermeasures, health resources, human resources, research and development, monitoring and evaluation recording and reporting and guidance and supervision. 2) **Permenkes** No. 4 of 2019 concerning Technical Standards for Fulfillment of Quality of Basic services in Minimum Service Standards in the Health Sector. This regulation contains standards for various services at the primary health care level, including NCDs. It regulates the standards of materials, equipment, human resources and types of services/goods for NCDs. 3) **Permenkes** No. 13 of 2022 concerning Amendments to Regulation of the Minister of Health Number 21 of 2020 concerning the Ministry of Health's Strategic Plan for 2020-2024. **Permenkes** No 13 of 2022 concerning disease prevention and control programs including NCDs, which contains objectives, program indicators, targets for 2022-2024. In addition to policies from the Ministry of Health, there are policies that apply to

regional apparatus organizations related to NCD control activities; 1) Ministry of Home Affairs Regulation No 54 of 2007 which regulates the establishment and guidance of posyandu, Ministry of Home Affairs Regulation No 19 of 2011 concerning guidelines for integrating basic social services in Integrated Service Posts, Ministry of Home Affairs Regulation No 18 of 2018 concerning Village Community Institutions and Village Customary Institutions, which contains the duties of these institutions for community empowerment. In addition, there is Law No.

6/2014 on villages, which contains information on community empowerment. Broadly speaking, policies that regulate or relate to NCD control come from two ministries, namely the Ministry of Health and the Ministry of Home Affairs, and are strengthened by the Village Law.

2. Human Resources

Human resources involved in POSBINDU NCDs activities consist of community elements (cadres) and health workers. The results of the study found that there were human resource problems in the implementation of the program. The following are excerpts from FGDs and interviews.

"R2: Puskesmas officer is only 1, so it is very difficult to achieve a good NCD program."

"R9: Cadres used are the same for all activities"

"R1: Less staff at the Puskesmas, too many programs to handle. POSBINDU schedule is not routine, adjust to the schedule of officers"

"R4: limited human resources for data entry"

Respondents stated that the health worker at the Puskesmas who is responsible for managing the NCD program is the only person



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and is added with other duties. As a result, the NCD program cannot be managed optimally. Human resources from the community are cadres and community leaders. In this study, it was found that the cadre policy in each village was different, both in terms of number, duties and incentives. There are villages that use Posyandu cadres as well as POSBINDU cadres and there are villages that appoint cadres specifically to manage POSBINDU activities. The number of cadres is only five people to mobilize the entire community over 15 years old and sometimes with concurrent duties as other cadres such as toddler cadres, elderly cadres and others.

3. Low community participation in POSBINDU activities

The community participation found in this study is very poor on POSBINDU NCDs activities. The following are excerpts from FGDs and interviews.

"R1: The same people come every month"

"R9: High challenge is to invite the community to participate in POSBINDU activities"

"R4: Not all targeted communities come to POSBINDU"

"R4: Need for continuous coaching and motivation about POSBINDU in the community"

"R10: It would be better to use digital media for socialization, especially for young people. Need to socialize the POSBINDU program by utilizing social media"

"R2: The community not yet understand the benefits of POSBINDU, needs more intense socialization"

Community participation in POSBINDU NCDs activities is very low. Most of the people who attend every month are the same targets, so they are not eligible for NCD services. Some people do not know information about NCD services, so they do not understand its purpose and benefits. There is no public awareness about the importance of screening for NCDs early on. More socialization through various methods is needed. Socialization through digital media and social media is considered more

effective for disseminating information and increasing public awareness.

4. Program budget and financing

In terms of financing the POSBINDU NCDs program, very low cadre incentive financing is still one of the obstacles. Logistics financing is felt to have been fulfilled, even at this time often leaving logistics materials because the service target is not achieved. The following are excerpts from the FGDs and interviews:

"R1: We recommend that cadres be given an honorarium per person served, because they are able to conduct examinations and input reports in the POSBINDU reporting system. Currently there is an incentive for cadres but it is not in line with the work, only 100,000 per month. To finance cadres, there should be a legal regulation such as the Health Minister Regulation. Later regional regulations will follow."

"R2: Not all villages form cadres, but use existing cadres. Need budget for cadre honorarium, cadre incentives vary by village."

Respondents stated that it is necessary to increase the honorarium of cadres to increase their responsibility in carrying out their roles and functions. There needs to be a policy that regulates incentives for all types of cadres and in accordance with their roles and responsibilities. Given that many programs use a community empowerment approach, the tasks of cadres are getting heavier, which should be followed by appropriate rewards.

5. Recording and reporting application

The POSBINDU program recording system uses an android application: the Satu IndonesiaKu (ASIK) application. Data input is carried out during the activity. The following are excerpts of FGD and interview results.

"R4: ASIK application often errors, limited human resources to input data. Recording using the ASIK application, but often errors, data that has been uploaded does not appear."



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"R2: Difficulty in entry data because the application often errors, data that has been entry. is not saved"

The recording and reporting system application provided cannot be used effectively because of frequent errors. Stake holders believe that the system needs to be improved and the recording system is expected to be integrated with other programs

6. Stake holder wishes

Based on the experience of running the POSBINDU program, there are several expectations of stakeholders, which are felt to make the program more effective. The following are excerpts from FGDs and interviews.

"R4: If possible, the NCD examination becomes a condition for obtaining certain services, for example: BPJS services, ID cards etc., so that the community must carry out the examination."

"R1: POSBINDU and other Posyandu activities altogether are made into one package."

"R2: NEED an integrated information system."

"R4: There should be a budget for incentives for POSBINDU cadres in accordance with their work."

The results of the study found that stakeholders want the NCD examination to be a prerequisite for obtaining other services, such as BPJS services. The prerequisite is expected to motivate people to attend POSBINDU. In addition to POSBINDU, there are elderly Posyandu activities. It is expected that the activities are integrated including the information system.

The NCD prevention and control program began in 2011. In 2012 the government developed the POSBINDU community empowerment program. POSBINDU is a public health effort to prevent non-communicable diseases by involving the community in planning, implementation, monitoring and evaluation. In 2015, Permenkes No 71 was issued, which regulates the control of non-communicable diseases.

The results found that the achievement of NCD of early detection services in Bali was very low in 2023. Early detection services until August 2023; hypertension 2.44%, obesity 3.39% and DM 2.10%. The achievement of NCD early detection services is assessed by the percentage of people aged 15-59 years who receive health screening services according to standards in their work area within one year (Kemenkes RI, 2019). Achievement data obtained from the reporting system on the Sehat Indonesiaku Application until August 2023 is still far lower than the target.

The results of in-depth interviews and focus group discussions found that the main problems of the NCD prevention and control program are low community participation and human resource problems both in the health sector and in the local government sector. The problem of human resources in the health sector is that the number of officers is very insufficient compared to the target set. The target set is all people aged 15 - 59 years in the working area, while the person in charge of the NCD program is one person per Puskesmas. Human resource issues in local government, in this case villages and sub-districts, are related to the number and incentives of cadres. The study found that the determination of cadres differs from one village/ kelurahan to another depending on their respective policies. Some villages use the same cadres for all community empowerment programs (posyandu for toddlers, POSBINDU, posyandu for the elderly, etc.), while others use different cadres for each program. Cadre incentives are perceived to be very low compared to the responsibilities they are given. Incentives vary from village to village. The role of the cadre is vital: socializing the program to the target community, mobilizing the community to participate, acting as a POSBINDU activity: registration and recording officer at table 1, table interviewer, conducting simple examinations (TB, BW, BP, blood sugar, cholesterol etc.) at the POSBINDU.



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The results of this study found that community participation was very low in the POSBINDU program. Referring to Permenkes RI no 4 of 2019, the standard of NCD services is in the form of health education and screening according to standards provided by health workers and trained non-health workers. Screenings that must be carried out measure TB, weight, abdominal circumference, blood pressure, and check blood sugar levels (Kemenkes, 2015; Kemenkes RI, 2019). POSBINDU PTM is a form of community empowerment to organize these activities. The implementation of POSBINDU PTM is carried out by existing health cadres or several people from each group / organization / institution / workplace who are willing to organize POSBINDU PTM, who are specially trained, coached or facilitated to monitor NCD risk factors in each group or organization. The implementation of POSBINDU is not well implemented, due to low community participation.

The success of a health service program is influenced by various factors. The first factor that needs to be considered before the program is implemented is the feasibility and usability of the program. Feasibility is an assessment of whether a new program can be implemented and integrated with existing programs. Aspects that need to be considered from feasibility include human resources and community participation. Usability is an assessment of the media/tools used in an intervention program. Problems will arise if the above process is not implemented.

In this study, one of the causes of low public awareness of screening was due to a lack of knowledge about health (Ciancio et al., 2021). Lack of knowledge about health can hinder making important health decisions and result in an increase in preventable mortality and morbidity. In this study, the condition that supports the low awareness of the community is that the socialization of service programs is

felt to be very lacking. (Ciancio et al., 2021; Ruhm, 2016).

One of the programs to increase public knowledge about health is health promotion. This program is one of the main programs in primary health care institutions in Indonesia (Kemenkes, 2015, 2022; Kemenkes RI, 2019). In this study, it was found that socialization and promotion about the importance of early detection of NCDs were still felt to be lacking by the community. Socialization carried out by health workers and by the POSBINDU organizing group was felt to be lacking. Promotion through digital media about the importance of early detection to prevent and control NCDs is highly desirable. Increasing public knowledge through promotion about diseases that can be detected and prevented early has an impact on morbidity and mortality rates from these diseases. For example, early diagnosis of hypertension can be followed up with behavior change or biomedical treatment to reduce the risk of cardio vascular disease (Ciancio et al., 2021).

Knowledge is key to prevention and treatment and in many contexts as a tool to improve public health and enhance individuals' ability to invest effectively in health throughout life. In high-income countries, regular health checks are conducted as part of routine healthcare visits (Pascal Geldsetzer, 2019; Swenson & Ebell, 2016).

In addition to the problem of community participation, human resource problems were also found in this study. There is only one health worker who is responsible for NCD activities at the Puskesmas. His job is not only to manage PTM but also to do other tasks at the Puskesmas. While the target of NCD services is all residents aged 15 - 59 years in the Puskesmas area. In the community sector, PTM cadres are also not rewarded commensurate with their responsibilities. The incentives given to cadres are too low, and some villages even use cadres from other programs, making their duties even harder. Similar results were found in research on the implementation of antenatal



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education programs. Health workers in the Denpasar area could not carry out the education program consistently because the workload was too high (Ariyani et al., 2021). The issue of health worker incentives is one of the factors that greatly affects performance. Good incentives, in accordance with expectations, will increase the motivation of implementing officers (Kok et al., 2015). In this study, the low incentives received by cadres certainly greatly affected their performance in carrying out their duties at POSBINDU NCDs. Cadres have a big role in the success of the POSBINDU program, especially in mobilizing the community and also efforts to socialize and educate the POSBINDU program.

Another problem found in this study is related to the NCD service reporting system application. Applications often experience problems, so that data cannot be entered by officers. An application before being used should be carried out a feasibility and usability test. This test can be used as material to improve before use. From the test process, it will be seen about the ease of use of the application, the suitability of features to the needs of use, the speed of the application, etc. (Kelso et al., 2009; Rothstein, Jennings, Moorthy, Yang, Gee, Romano, Hutchful, Labrique, & Lefevre, 2016; Rothstein, Jennings, Moorthy, Yang, Gee, Romano, Hutchful, Labrique, & Lefevre, 2016; Takeuchi & Horiuchi, 2017).

In terms of policies related to the POSBINDU program, stakeholders want a legal regulation that protects local governments so that they can provide appropriate incentives to cadres. So far, there is no policy that can be used to increase the honorarium of the cadres. In addition, it is also expected that there is a recording and reporting system that is integrated with other community empowerment programs.

Conclusion

The achievement of POSBINDU NCDs services is still far from the specified target.

Problems found related to the implementation of PTM are problems: Human resources for health workers and non-health workers, budget and costs, policies, recording and reporting applications. We recommend increasing public awareness to reduce morbidity and mortality rates, a legal regulation that protects local governments so that they can provide appropriate incentives to cadres, and a reporting system that is integrated with other community empowerment programs.

Acknowledgement

The completion of this research paper would not have been possible without the support from Ministry of Health Republic of Indonesia and Poltekkes Kemenkes Denpasar for providing the necessary facilities and resources.

Conflic of Interest

There are no conflicts of interest with various parties in this research.

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