

# Policy and Role Analysis Integrated Health Education Centers for Non-Communicable Diseases Toward The Prevention and Controlling of Hypertension *by*

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**Submission date:** 26-Feb-2019 03:28PM (UTC+0800)

**Submission ID:** 1084010252

**File name:** IJPHRD\_Dec\_Hardi\_Yandrizal\_pp705.pdf (315.33K)

**Word count:** 3048

**Character count:** 17832

# Policy and Role Analysis <sup>2</sup> Integrated Health Education Centers for Non-Communicable Diseases Toward The Prevention and Controlling of Hypertension

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## ABSTRACT

Integrated Health Education Center <sup>1</sup> for Non-communicable Disease/IHEC for NCDs (Posbindu PTM) is a place of community participation for early detection, preventing and controlling hypertension of non-communicable diseases. *Posbindu PTM* is one of the promotional and preventive health efforts that is implemented in an integrat<sup>15</sup> routine, and periodic, and the non-communicable risk factors that are found immediately refer to basic health care facilities. It is necessary to examine the role of *Posbindu PTM* in controlling hypertension risk factors.

The study used a <sup>1</sup> combination method approach with sequential exploratory <sup>1</sup> design. Exploratory design was begun with the main qualitative method to know the knowledge, attitude and behavior of members of *Pos<sup>2</sup>bindu PTM* to hypertension. The results of qualitative and quantitative methods were analyzed to develop the Integrated Health Education Center for Non-communicable Disease/IHEC for NCDs (*Posbindu PTM*).

People feel useful coming to *Posbindu PTM*, so want to come every month. The active community who came to *Posbindu PTM* increased their knowledge about Hypertension and non-communicable disease (PTM).

The community who actively coming to *Posbindu PTM* supported the behavior of preventing and controlling of hypertension. *Posbindu PTM* can play a role in controlling hypertension for active members.

**Keywords:** *Posbindu PTM, behavior, prevention of hypertension, Analysis Policy.*

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## INTRODUCTION

Non-communicable diseases (NCDs) has been the leading cause of death in Indonesia 71% in 2012, specially heart, <sup>1</sup> diabetes, cancer and chronic respiratory diseases<sup>1</sup>. The non-communicable diseases (NCDs) can be prevented through effective intervention against risk factors, including: tobacco use, unhealthy diet, inadequate physical activity and alcohol use<sup>2</sup>.

Non-communicable disease (NCDs), also known as chronic disease or lifestyle-related illness is not <sup>2</sup> transmitted from person to person<sup>3</sup>. The effort of prevention and control of non-communicable diseases

under development in Indonesia is Integrated Health Education Center for Non-communicable Disease/IHEC for NCDs (*Posbindu PTM*). The purpose of *Posbindu PTM* is to increase community participation in preventing and early discovery of non-communicable diseases risk factors<sup>10</sup>. The activities of the post are measurement of body weight, height, body mass index (BMI), abdominal circumference, and blood pressure, physical activity and/joint exercise and counseling.

WHO recommends a healthy lifestyle by eating lots of fruits and vegetables, reducing fat, sugar and salt intake as well as exercise<sup>4</sup>. The developing post is one

of the effort to prevent and control non-communicable risk factors. The purpose of this research is to know the role of *Posbindu PTM* to increase knowledge, attitude and behavior to prevent and control hypertension and other non-communicable diseases.

## MATERIAL AND METHOD

The study used a combination method approach with sequential exploratory design. Exploratory design was begun with the main qualitative method to know the knowledge, attitude and behavior of members of *Posbindu PTM* to hypertension. The finding results were proved by quantitative methods to determine the knowledge, attitudes, behavior of members on prevention and controlling hypertension.

Qualitative Methode: 85 member informants who participated in 10 (ten) *Posbindu PTM* activities. The population in this study was members of *Posbindu PTM* in 10 districts/cities in Bengkulu Province. The number of samples in this study is determined based on the number of members of *Posbindu PTM* in selected districts/municipalities with stratified random sampling cluster sampling technique, based on the number of members of *Posbindu PTM*, mostly medium and very few. The number of members 1580 based on registration each month from 79 posts. The samples to measure hypertension with the criteria of visits at least 6 months regularly every month *Posbindu PTM*. The number of samples to know the knowledge, attitude and behavior of 472 members with the way insidental sampling at the time of the implementation at *Posbindu PTM*.

## RESULTS

Result of qualitative method with case study approach was at 10 *Posbindu PTM*. Preparation for the implementation of was done by cadre and public health center officers. Cadre invited the head of neighborhood association/head of hamlet to mobilize the community to utilize *Posbindu PTM*. The results of interviews with cadre were as follows:

Members *Posbindu PTM* every Friday morning doing gymnastics together in the public health center, integrated counseling post of non-communicable disease was held once a month every Friday on the third of the month. The activities include blood tests, weight measurement, and height once a month (Cadre *Posbindu PTM* F)

The members who actively come to *Posbindu PTM* feel the benefits of following the activities. They got knowledge about the risk factors and prevention of hypertension, and also checked up their health. *Posbindu PTM* activities begin with registration, measurement of height, weight, abdominal circumference, and blood pressure/ tension. Certain members check for instantaneous sugar, cholesterol and uric acid in the blood. Members get counseling who have hypertension risk and counseling about non-contagious diseases for all members. Counseling about the non-communicable diseases conducted every month aims to improve knowledge, change attitudes and behavior of society against hypertension and other non-communicable risk factors. Based on the interview result, one member said:

..The treatment, counseling, examination (height, weight, blood pressure, blood sugar, check up disease, medication, non-communicable diseases/ clean and healthy life behavior, every month comes to *Posbindu PTM* (Informant 2, *Posbindu PTM* B) ...

The Information from participants on the implementation of *Posbindu PTM* can be concluded, all say useful because it can know the condition of health, increase knowledge about hypertension and other non-communicable diseases, so every month trying to come to *Posbindu PTM*.

Qualitative results compiled by dependent and independent variable, knowledge about *Posbindu PTM*, hypertension and other PTM, and attitude, behavior of non-contagious diseases prevention can be seen in Table1.

**Table 1: Knowledge, Attitude, Behavior toward Posbindu PTM, Hypertension and other commnucable diseases**

Research Variables	Category	Category		p value
		Prevention behavior of PTM		
		Less	Good	
Knowledge of non-coomunicable diseases	Less	72,6%	27,4%	0,000
	Good	30,4%	69,6%	
		Knowledge of PTM (non-communicable diseases)		
		Less	Good	
Behaviour of coming to Posbindu PTM	Less	40,5%	59,5%	0,002
	Good	24,2%	75,8%	

Knowledge of PTM (non-communicable diseases) with behavior of preventing hypertension and other non-communicable diseases, statistical test analysis using chi square test obtained results p value 0,000 < p 0.05, with 5% confidence degree. Means there is a relationship of knowledge with behavior to prevent hypertension and other non-communicable diseases.

Bivariate statistical test analysis using chi square test obtained p value 0,000 < p 0.05 with 5% confidence

degree. It means there is a relationship between behavior of coming to Posbindu PTM with behavior to prevent hypertension and other non-communicable diseases..

Multivariate analysis using General Linear Statistical Test Model Repeated Measures one group. The results of this analysis will show the decrease of normal hypertension members of the first month, second, third and so on can be seen in Table 2.

**Table 2 : Analysis result of General Linier Model Repeated Measures Toward members with Normal Blood Pressure**

Month	Total n	n of Events	N	Percent
1 <sup>st</sup>	428	0	428	100%
2 <sup>nd</sup>	428	24	404	94.4%
3 <sup>rd</sup>	428	64	364	85.0%
4 <sup>th</sup>	428	80	348	81.3%
5 <sup>th</sup>	428	109	319	74.5%

Source : Processed Primer Data

**DISCUSSION**

**The role of Posbindu PTM Knowledge, Attitudes, and Prevention Behavior of PTM**

The result of research showed there is correlation of

knowledge with behavior of non-communicable diseases prevention and there is relationship of coming behavior to Posbindu PTM with behavior of prevention to non-communicable diseases. Increased public knowledge facilitated officers in implementing the program, and improve community utilization. The NICE study (2008), the invasion of community involvement showed

patients were activated to take a larger share and control in managing their own conditions<sup>5</sup>. According to WHO (2015) integrated health services are managed health services and ensure the continuity, including health promotion, disease prevention, diagnosis, treatment, disease management and rehabilitation on different levels of the health system as required<sup>6</sup>. Increased knowledge was associated with behavior to prevent hypertension and other non-contagious diseases. Green in Ashwell and Barclay (2009), said that the health of individuals or communities were influenced by two factors: a) behavioral factors and b) factors outside behavior (non-behavior). Furthermore, behavioral factors according to Green, grouped 3 (three) behavior change factors that predisposing (predisposing), enabling (enabling), reinforcing (reinforcement)<sup>7</sup>.

The Health Belief Model (HBM) was developed to find out why people did or did not use the prevention services offered, and have grown to address new problems in prevention and detection (eg, screening) as well as lifestyle behaviors such as healthy living behaviors and injury prevention. The Health Belief Model (HBM) argued that health behavior was determined by two cognitions: the perception of disease threats and behavioral evaluation to counteract threats. Members who actively come to *Posbindu PTM* increased knowledge about preventing, controlling and the impact of *PTM*, so that the members having behavior to control hypertension.

The concept of Health Belief Model explains<sup>8</sup>, namely: 1) Perceived Severity is the subjective belief of individuals in the spread of disease caused by behavior or believe how dangerous the disease so as to avoid unhealthy behavior to avoid pain. Perceived severity also has a positive relationship with healthy behavior. If the perception of individual severity is high then he will behave in a healthy manner; 2) Perceived Benefits is a belief in the advantages of recommended methods to reduce the risk of disease.

Health Belief model developed on empowerment of *Posbindu PTM* to know whether the members actively use *Posbindu PTM* every month. The Health Belief model is most often applied to preventative and asymptomatic health issues such as cancer detection and early hypertension, and is relevant to interventions to reduce risk factors for cardiovascular disease<sup>9</sup>.

In *Posbindu PTM* activities, members were given counseling about non communicable diseases including hypertension and given special counseling for members suffering from hypertension in detail described hypertension control efforts. According to Alsairafi (2010) the increased risk of physical inactivity in controlling hypertension in our study suggested that general practitioners should be used to prescribe strenuous physical exercise<sup>10</sup>. According to Muhamedhussein (2016) tried to show the level of hypertension and know the risk factors that could explain the high prevalence of hypertension<sup>11</sup>. Beigi (2014) said that educational interventions had a highly desirable effect on lifestyle modification and control of blood pressure. Control hypertension in the population requires public education programs to promote hypertensive awareness and lifestyle modification which it is an urgent need<sup>12</sup>.

The relationship of coming behavioral to *Posbindu PTM* with the behavior of preventing hypertension had an impact on the decrease of hypertension members in the first, second, third, fourth, and fifth month.. This strategy will address the behavioral and environmental factors associated with the prevention and control of high blood pressure to achieve three sub-goals (prevention, early detection and control of hypertension). There are three main strategies: public health promotion, health care system and system support strategy<sup>13</sup>.

Overall, this study determined the high prevalence of hypertension in the study population. Hypertension is associated with smoking, alcohol consumption, low physical activity, obesity, and diabetes. Community-based approaches to reducing hypertension and risk factors are important. Effective community-based prevention and control strategies can provide the best opportunity to avoid hypertension-driven health and economic consequences in Nepal<sup>14</sup>. Researchers recommend: 1) raising awareness of hypertensive patients about hypertensive risk factors is very important to be motivated to adopt healthy lifestyle behaviors in an effort to control the disease; 2) encourage hypertensive patients to change essential lifestyle behaviors including regular physical activity adoption, proper weight control, follow proper diet, stop smoking and alcohol, reduce stress as much as possible; 3) the focus must be on public education in understanding high blood pressure and its impact on public health; 4) understanding the status of patient knowledge and perception for modification of lifestyle behavior as an important factor in the control

of hypertension<sup>15</sup>.

#### Policy Analysis Posbindu PTM

People who come every month follow the activities at *Posbindu PTM*, know the health condition, get knowledge about the effort to prevent, prevent the non-contagious diseases and feel the benefits of the implementation of *Posbindu PTM*. *Posbindu PTM* integrated with mobile public health center could modify factor, cultivate trust and action to take advantage at *Posbindu PTM*. WHO (2015) recommended a more people-centered and integrated health system to help build a more effective health system<sup>6</sup>.

Following the activities of *Posbindu PTM* could modify the knowledge of factor because of counseling was given to the members, early detection of disease by performing measurements and blood tests such as blood sugar, cholesterol and uric acid and other examinations. This study showed that community-based lifestyle interventions delivered by trained field health workers may be a potential solution to combat hypertension and diabetes mellitus among middle-aged and elderly people in resource-poor environments<sup>16</sup>.

*Posbindu PTM* is one of the main containers of the implementation of Healthy Living Community Movement (GERMAS). *Germas* is a systematic and planned action undertaken jointly by all components of the nation with awareness, willingness and ability to behave healthy to improve the quality of life. Most of the activities carried out on the post One of the activities of routine medical examination is the main activity of *Posbindu PTM* which strongly supports *Germas*.

Successful *Germas*, can not only rely on the role of the health sector alone. The role of Ministries and Institutions in other sectors also determines, and is supported by the participation of all levels of society. *Posbindu PTM* increase knowledge and understanding of society to behave "Cerdik" (Health Check periodically, Awake smoke cigarette, Diligent physical activity, Healthy diet with balanced nutrition, adequate rest and Manage stress). Activity *Posbindu PTM* will be able to improve the success of *Germas* which aims to increase awareness, willingness and ability of people to behave healthy, including controlling hypertension in an effort to improve the quality of life.

## CONCLUSION

*Posbindu PTM* aimed to make early detection, prevent and control blood pressure of the members. The activities of *Posbindu PTM* performed the measurement of blood pressure, non communicable diseases including hypertension, counseling for members indicated by non-communicable disease based on examination and measurement results.. Active members felt useful following *Posbindu PTM*, and they always want to come every month. The members who were suffering from hypertension and actively come every month could control blood pressure down to 74.1% of patients in the fifth month. The role of *Posbindu PTM* with the activities of measuring blood pressure, height, body weight, counseling/education, counseling for hypertension indicated members could improve knowledge and healthy behavior to control members with active hypertension. *Posbindu PTM* is one of the main containers of the implementation of Healthy Living Community Movement (GERMAS).

**Conflict of Interest Statement:** The authors declare that there is no conflict of interest.

**Source of Funding:** The Center of Standardization and Continuous Education of Indonesian Ministry of Health for the scholarship and the Government of Bengkulu

**Ethical Clearance:** Health Research Ethics Committee, Faculty of Medicine Andalas University of Padang

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