The Factors of Management, Communication, Partnership, and Innovation in the Implementation of Posbindu (Integrated Health Post) NCD: A Study in Kelurahan Gunung Batu Bogor City

*Siti Khodijah Parinduri, **Pujiyanto

* Faculty of Health Science, University of Ibn Khaldun Bogor

** Department Health Policy and Administration, Faculty of Public Health Universitas Indonesia

Email: sikho.parinduri@gmail.com

Abstract. By 2015, 68% of deaths in Indonesia are due to non-communicable diseases (NCD) and are forecast to increase to 74% by 2030. Riskesdas data of 2013 show that 69.6% of cases of diabetes mellitus and 63.2% of cases of hypertension have not been diagnosed. The government has been trying to proactively make efforts to prevent NCD through the implementation of Posbindu (Integrated Health Post) NCD, but visit Posbindu NCD in the work area of Pasir Mulya Puskesmas, Bogor City is very diverse. The purpose of this study is to analyze the factors of management, communication, partnership, and innovation in the implementation of Posbindu NCD and determinants of the implementation of Posbindu NCD. We conducted in-depth interviews, focus group discussions, document review and observation at two Posbindu NCD with the highest number of visits and the lowest in Gunung Batu Village, Bogor City in 2017. We interviewed 15 informants, consisting of cadres, in charge of NCD Puskesmas, in charge of Puskesmas Pembantu and supervisor of Posbindu NCD. This research found 4 factors, namely management (human resources, fund, and facilities), innovation, communication and partnership that influence the result of Posbindu implementation. Therefore, to run effectively the Posbindu NCD program, then 4 of those factors need to be optimized.

Keywords: Management, Non-Communicable Disease, Posbindu NCD

Abstrak. Pada tahun 2015 sebanyak 68% kematian di Indonesia disebabkan penyakit tidak menular (PTM) dan diproyeksi meningkat menjadi 74% tahun 2030. Data Riskesdas tahun 2013 menunjukkan bahwa 69,6% kasus diabetes melitus dan 63,2% kasus hipertensi belum terdiagnosis. Pemerintah proaktif melakukan upaya pencegahan PTM melalui pelaksanaan Posbindu PTM. Data kunjungan Posbindu PTM di wilayah kerja Puskesmas Pasir Mulya, Kota Bogor menunjukkan jumlah yang sangat beragam. Tujuan penelitian adalah menganalisis faktor manajemen, komunikasi, kemitraan, dan inovasi dalam pelaksanaan Posbindu PTM dan faktor penentu pelaksanaan Posbindu PTM. Disain penelitian adalah studi kualitatif dengan metode wawancara mendalam, focus group discussion (FGD), telaah dokumen, dan observasi di dua Posbindu PTM dengan jumlah kunjungan tertinggi dan terendah di Kelurahan Gunung Batu, Kota Bogor tahun 2017. Informan penelitian sebanyak 15 orang yang terdiri dari kader, penanggung jawab program PTM Puskesmas, penanggung jawab Puskesmas Pembantu dan pembina Posbindu PTM. Penelitian menemukan terdapat perbedaan manajemen (SDM, dana, dan sarana), inovasi, komunikasi dan kemitraan antara Posbindu RW 1 dan RW 7 yang memengaruhi hasil pelaksanaan Posbindu PTM. Keempat faktor tersebut pada Posbindu dengan kunjungan terbanyak berjalan lebih optimal dibandingkan dengan Posbindu dengan kunjungan terendah. Agar program Posbindu PTM dapat berjalan efektif maka perlu optimalisasi faktor manajemen, inovasi, komunikasi dan kemitraan.

Kata kunci: Manajemen, penyakit tidak menular, Posbindu PTM

INTRODUCTION

Non-communicable disease (NCD) becomes a challenge in the development of world health. By 2015, World Health Organization data show that 68.4% of deaths are due to Non Communicable Diseases and are projected to increase by 2030 to 73.9%. That is, in the world there is an increase in death due to NCD every

year. NCD has become a major health problem besides the problem of infectious diseases that still not over (Ministry of Health, 2013).

Basic Health Research (Riskesdas) in 2013 showed that 69.6% of cases of diabetes mellitus (DM) and 63.2% of cases of hypertension are still undiagnosed. Many people do not realize that he was suffering from NCD

because the course of NCD disease often showed no specific symptoms and clinical signs. The prevalence of pre-diabetes in the Fountaine (2016) study shows that one in ten Indonesians fall into the category of impaired blood sugar tolerance, which if no intervention and secondary prevention will become diabetics. The high prevalence of undiagnosed diabetes indicates a lack of awareness of high-risk individuals for self-examination into health care. This has implications for delays in handling and complications resulting in even earlier deaths (Fountaine, 2016; Rahajeng et al., 2014).

Fauzia's research (2013) on the utilization of Posbindu NCD by the population aged 15-44 years found the number of visits is still low. Factors that cause low visitation rate are health service organization factors including policy variables that are upstream and multicommentary problems that are less applicable in the field. The lack of resource variables also resulted in NCD's Posbindu not optimal. Consumer factors that influence the utilization of the difference of perception to Illness (ill) and disease (disease) and lack of socialization as the main determinant of low utilization Posbindu NCD. The condition of Posbindu NCD officers and cadres who often also serve as duty also contribute to the low utilization of Posbindu NCD (Fauzia, 2013). In the research on Posyandu, there is positive correlation of communication (leadership) with Posyandu's effectiveness, the better the more effective communication posyandu (Maryati, 2015).

Jones in Maryati (2015) argues that control, innovation and efficiency determine the effectiveness of the organization. The public health program can run successfully (based on Frieden's health effectiveness program theory) if the organization performs 6 keys, ie (i) innovation to improve evidence base action, (ii) technical guidelines that provide a clear focus on intervention, (iii) good management especially through monitoring, evaluation and improvement of the program, (iv) partnerships with the public and private sectors, and (v) timely and appropriate communications to the health community, stakeholders and the community, and (vi) political commitment which can add resources and support the effectiveness of action.

The city of Bogor experienced an increase in the number of cases of NCD and the downgrading of the Public Health Development Index (IPKM) from the rank of 72 in 2007 to be ranked 188 in 2013. Similarly, NCD indicator is still below the indicator of West Java

province 0.6029 and national Indonesia 0.6267 (Ministry of Health, 2014).

Interviewing Bogor City Health Office and person in charge of NCD program, we obtained information that hypertension and diabetes are the two noncommunicable diseases (NCD) in Bogor City. Out of 24 Puskesmas in Kota Bogor, Pasir Mulya Health Center is considered the best in carrying out Posbindu NCD indicated by the activeness of the implementation of Posbindu NCD, kader activeness, complete equipment, and training of cadres.

Puskesmas Pasir Mulya builds 3 urban villages with 31 Posbindu NCD and since 2015 has integrated with posyandu for elderly, so that health examination of elderly become health examination with target group age 15 years and above.

During the period of March 2016 to January 2017, the highest number of visits by Posbindu NCD Kelurahan Gunung Batu was NA of 1 while the lowest was NA of 7. The difference in the number of visits which far enough encouraged the researcher to study deeper the factors of innovation, communication, management, in the implementation of Posbindu NCD in Gunung Batu Village and know the factors that determine the results of the evaluation of the implementation of Posbindu NCD at Pasir Mulya Health Center Year 2017.

METHOD

This is a qualitative study. We conducted in-depth interviews, focus group discussion, document review, and observation. Qualitative data collection techniques are more suitable in obtaining useful information for decision making to intervene public health programs by looking at the components needed implementation. The research was conducted in Pasir Mulya Bogor Public Health Center, in two Posbindu with the lowest and most visited visit, in NA (RW, neighborhood association) of 1 and NA of 7 of Gunung Batu respectively. We interviewed 15 people, consisted of NCD Officers in Puskesmas Pasir Mulya, supervisor of Posbindu NCD, Kader, Community Leaders, Participants Posbindu NCD in NA of 1 and NA of 7 Gunung Batu Village.

RESULT AND DISCUSSION

Management Factor in Implementation of Posbindu NCD

From in-depth interviews and focus group discussions we found differences in personnel management in both Posbindu NCD NA of 1 and NA of 7 as presented in Table 1.

Table 1. Differences in HR Management Posbindu NCD NA of 1 and of 7

Dimension	NA of 1	NA of 7
Recruitmen	-based on voluntary and NA recommendations from Neighborhood - there was a cadre regeneration process	 volunteer driven by a sense of responsibility and time-lapse factor for not having a baby. difficulty finding new cadres.
Processes	-activity in Posbindu NCD, FWM (family Welfare Movement, and Posbindu supported by a respected and experienced senior cadre a lot number of cadres (10)	- active in Posbindu and Posyandu, only 1 cadre active in FWM new cadres and not yet have a big influence in the community.
Training	-3 cadres have been trained	-3 cadres have been trained
Job description	- Clear with a 5 table system - compact: completing joint reports, shared meals, and uniforms.	- situational

The presence of good human resources management, in this case the cadres of Posbindu NCD supported implementation of the program. It began with voluntary recruitment. In its implementation in NA of 1 the recruitment of cadres was supported by the role of NA chairman in recruiting good cadres in the community. Recruitment in NA of 7 was done with self awareness and was influenced by how they care toddler, both as children and grandchildren. Cadre in NA of 1 were one longlife cadre plus new cadres who become the successor in addition to an experienced cadre so there were transfer of knowledge.

There were various reasons for being a cadre. Some were children or wives of NA (RT, neighborhood association) heads, that became as NA representatives in mobilizing the community. Some were children of previous cadres that became old. The results of this

study are in line with Rahmawaty's (2014) research which found that some cadres thought that they became cadres because their husbands became heads of NA, some were willing to help Posbindu activities, some also wanted to socialize with the community, and others wanted become a cadre because of his own will or initiative. This is a challenge in managing volunteer people to carry out its role. Nevertheless, empowerment-oriented development provided an opportunity for every member of the community to participate in the development process by obtaining equal opportunity and enjoying such development results in their capacity (Fauzia, 2013).

Posbindu NCD NA of 7 with the lowest number of visits has problems in recruiting cadres so the number of cadres in charge is often less than five people. This is in line with Thomas Frieden's suggestion that HR management is one of the challenges in the health program. Management is often difficult to recruit, train and retain qualified human resources to implement effective health programs. Limited budget becomes one of the problems. Good human resource management can be achieved through continuous training and awards (Frieden, 2014).

Sufficient number of human resources supports a clear division of roles. Kader as a team of managers of human resources through several efforts in order to increase cohesiveness and cooperation. Posbindu NCD NA of 1 performs several ways including, using uniform every time Posbindu NCD, making Posbindu NCD place as a means to gather and complete report together, and hold meal together every time finished Posbindu NCD.

Although voluntary, existing human resources must have the ability to perform tasks in the community. This is supported by various trainings conducted by Puskesmas or Dinas Kesehatan. Training is provided by inviting cadre representatives in turn. The monitoring function of the Posbindu NCD Coach supports the alignment of the HR work direction in accordance with the objectives to be achieved from the implementation of Posbindu NCD. Ongoing analysis to improve every aspect of program and management implementation is critical to program innovation and progress (Frieden, 2014).

In addition to human resources management, funds are one of the elements of management in the implementation of Posbindu NCD. Source of funds Posbindu NCD obtained from puskesmas, but in this

case Posbindu NCD with the most visits have self-help funds obtained from the help of NA and donors. Public participation in funding Posbindu NCD with the most visited is NA of 1 as much as 80% while in NA of 7 only 30%.

Table 2. Funding Differences between Posbindu NCD NA of 1 and of 7

Aspek	NA of 1	NA of 7
Source of fund	Posyandu Revitalization fund Self rising fund – NA assistance Sponsor	Posyandu Revitalization fund Self rising fund –
Proportion of fund	Community 80% and puskesmas 20%	Community 30 % and puskesmas 70%

Posbindu NCD cadre NA of 1 manages Posyandu revitalization fund and community self-help outcomes to support the implementation of Posbindu NCD. Posyandu revitalization fund specifically used for stationery, photocopying and transportation supporting activities. While at Posbindu NCD NA of 7 has few donor so most of fund come from fund of Posyandu revitalization. Non-governmental funds in NA of 7 are not sufficient for the development of other Posbindu activities. Another element implementation of Posbindu NCD is the means and infrastructure. Observations have been made of the building as a venue for the implementation of Posbindu NCD in both NA of 1 and NA of 7. Information obtained from the coach and community leaders states that NA of 1 has a relief building from the National Community Empowerment Program (PNPM) and NA of 7 assistance from kelurahan through local NA.

Observations indicate that the building or facility of Posbindu NCD execution in NA of 1 contained sufficient space as a waiting room, neatly decorated with inside wall information, and the exterior of the building surrounded by family medicinal plants carefully groomed. Green walls and floors blend with the color of plants.

Building Posbindu NA of 7 consists of one room with a size that can be filled by 4 cadres and 2 participants. Because there is no waiting room then the participants who wait their turn are seated outside waiting at the stalls or standing on the street. MOST room and mossy walls make the impression less comfortable and the air circulation was not good because it is too dense and feels hot.

About the Posbindu NCD facility, the result of interview with the NCD's Posbindu trainer in NA of 7 is available Card Go to Health (KMS) from Puskesmas. KMS stock runs out prompting cadres to create their own KMS. Sarana Posbindu NCD is managed jointly by cadres in NA of 1. The existence of family medicinal plants around Posbindu NCD and other complete supporting equipment become the attraction of the community to visit and provide a sense of comfort while waiting.

Innovation Factor in the Implementation of NCD Posbindu

According to the guideline, Posbindu NCD was implemented with a five-table system. In Posbindu NCD NA of 1, a five-table system was added with additional medication and food for participants. While in Posbindu NCD NA of 7, to increase the number of visits then the implementation along with the activity of recitation of mothers in the mosque near Posbindu NCD.

Innovation increased the attendances both in NA of 1 and NA of 7. Supplementary feeding activity becomes one of the strategy to attract the participants, although the distributed food is not much, but gives the impression for the society. Innovation implementation can facilitate program improvement and improvement in accordance with real experience. Further innovations in program evaluation can build evidence-based interventions with better identification of what is not in accordance with what is planned and what is already effective and ready for development. When program holders want to improve creativity and innovation, the decision of the coach must stimulate and support creative and innovative ways of thinking. Instead, it will inhibit the development of creativity and innovation when cadres are separated or sequestered from the program participation section, when focused only on short-term outcomes and when funds and rewards do not support innovation (Longest, 2015).

Innovation that has been done in NA of 1 is supported by the participating donors and the unity of cadres and village officials in succeeding the implementation of Posbindu NCD. While the NA of 7 still has not received support from donors in an effort to run innovations that can increase the number of community visits. Innovation is vital in enabling ASEAN nations to successfully address the growing crisis of NCDs (Lim, Chan, Alsagoff, & Ha, 2014).

Communication Factors in Posbindu NCD Implementation

Communication of NA of 1 cadres and NA of 7 with Puskesmas was conducted through monthly routine meetings consisting of mini lokmin (lokmin) conducted by Puskesmas and presenting all representatives of Pasis Mulya Puskesmas area consisting of three urban villages: Pasir Mulya, Loji and Gunung Batu . The application of communication elements in Puskesmas management can be reviewed in routine meetings held at least once a month with two-way nature (Muninjaya, 2004). Before Lokmin is done, a meeting of cadres of Gunung Batu urban village with a coach is conducted to discuss matters related to the implementation of Posbindu NCD. This activity is done with two-way communication so that cadres and coaches can discuss, other than through WA or phone.

Table 3. Posbindu NCD Communication NA of 1 and of 7 in 2017.

Aspect	NA of 1	NA of 7
Puskesmas to cadre	-Communication using mobile-phone electronic mediaCadre forum in mini workshop of Pasir Mulya Health Center -Column special cadres of Gunung Batu urban village	
Community leader to cadre	-Communication is good	-Communication for information delivery
Cadre to community	-from mouth to mouth -the announcement in the mosque -sweeping - in daily social activities such as recitation and social gathering	-from mouth to mouth -the announcement in the mosque -sweeping

Communication cadres NA of 1 and NA of 7 with the community conducted through word of mouth through chat activities. There are also announcements directly through mosque loudspeakers and home-based methods by bringing door to door. In addition, the cadre at NA of 7 also sent a short message in communicating. This is in line with Ivancevich (2007) assertion that in an organization, the flow of communication from individual to individual varies in various aspects, from face to face and in group order to short message form.

Effective communication can lead to behavioral change, but more important is the emergence of political commitment and program effectiveness by involving various community actors. New communication and technological tools facilitate interactive conversations, allowing health practitioners to be able to engage in dialogue with representatives of affected communities and other stakeholders (Frieden, 2014).

Communication enhances the visit of Posbindu NCD. NA of 1 established good communication with the community and local community leaders in supporting the implementation of Posbindu NCD. The results of in-depth interviews and FGDs indicate that there are variations of responses related to factors affecting the implementation of NCD Posbindu, but communication is the answer given by most informants. This indicates that communication is an important part of the success of NCD's Posbindu in NA of 1. While in NA of 7, communication has been built with community leaders shown has not intense and reciprocal communication causing the participation of community and community leaders themselves not yet optimal.

Rahmawaty's research indicates that there is no constraint in delivering information from cadres to public figures as seen from the involvement of community leaders such as NA or NA chairman in community activities such as recitation, arisan, PKK meetings, in the delivery of information on elderly activities (Rahmawaty, posbindu 2014). Implementation of NCD Posbindu in NA of 1 shows that the role of community leaders in the delivery of information activities Posbindu NCD by community leaders through pengajian activities, arisan, PKK meetings and other activities. While implementation of NCD Posbindu in NA of 7 is not optimal because of the lack of participation of community leaders such as NA's mother in community activities.

Good communication not only communicates understand the meaning of the message, but also emotionally motivated to implement or comply the message it receives (Sulaeman, 2011). In the implementation of Posbindu NCD NA of 1 and NA of 7 coaches to communicate by using everyday language that is Sundanese language so that (a) cadres and participants are able to understand and even encouraged to obey messages from the coach as a health worker from puskesmas and (b) a familial bond that encourages the community to respond to the call to attend the NCD Posbindu activities.

Partnership Factors in the Implementation of Posbindu NCD

In-depth interviews informants conveyed that formally there is no form of partnership in the implementation of Posbindu NCD in the built area of Pasir Mulya Community Health Center. The partnership in Posbindu NCD in Pasir Mulya region (including NA of

1 and NA of 7 urban villages of Gunung Batu) is done by cross-program cooperation in Puskesmas itself, between NCD, Promkes and Nutrition. The informant stated that NA of 1 had a partner in completing the need for the implementation of Posbindu NCD through the acquaintance of a relative or community of cadre acquaintances, but the same was not found in NA of 7.

In addition to partners in supporting financially, support from several parties became partners in improving the success of the NCD Posbindu implementation. NA of 1 in conducting socialization and invitation to the community in partnership with urban village heads and wives, head of NA and community leaders.

The results of in-depth interviews on NA of 7 reveal partnerships conducted in the form of encouragement of community leaders and scholars and some communities who want to contribute in the form of beverages, but still need to be improved. The statement was supported by the FGD results of NA of 7 cadres stating the support of NA, community and ulama leaders in the form of attendance and announcement to the residents. While partners in the implementation of Posbindu NCD in NA of 1 is village leader, religious leaders and donors. Related innovations in non-communicable diseases management in ASEAN diabetes community in Indonesia strengthen partnerships with government as one of the main strategies for continuous advocacy at all levels of government (Lim et al., 2014). The implementation of the partnership in NA of 1 encourages the participation of various parties in contributing not only in the form of positive responses but also in contributing. It is formed because the cadres who have been considered senior and have the power in mobilizing the community.

The implementation of Posbindu NCD

Innovation in NA of 1 is supported by partners who can contribute morally and materially. The presence of partners enabled Posbindu NCD to innovate. Collaboration depends on individual and community understanding of well-being that is influenced by social, environmental, and economic factors of health services. As long as health promotion and management belong to not just a single profession or sector, broad partnerships built through the advocacy process will narrow the health gap and maintain or improve the health of the population. Lim's (2014) study finds partnerships as an important tool in improving public health outcomes due to shared intelligence of information that increases understanding of the needs and desires of local

communities.

Potential partnerships in supporting the implementation of Posbindu NCD include Corporate Social Responsibility (CSR), which is conducting health programs independently, universities that can supply experts, private practices, and other potentials. Posbindu NCD NA of 1 and NA of 7 need to partner with government agencies, community organizations, companies, foundations, donors, patients volunteers. Partnerships are crucial to keep the program running, especially during times budgetary difficulties. Partners can complement human and financial needs. This is supported by the location of Kelurahan Gunung Batu located in urban areas.

Implementation of Posbindu NCD

The results of recording and reporting become the material in conducting analysis and evaluation of the program in accordance with the objective of the implementation of NCD Posbindu is to prevent and control NCD risk factors from an early age. Risk factors that have been monitored regularly can always be maintained under normal conditions or do not fall into the bad category (Rahajeng et al., 2014). The evaluation of the implementation of NCD Posbindu in NA of 1 and NA of 7 shows the largest number of visits as an indicator of the ability to perform the function of preventing non-communicable diseases through control of risk factors that have been discovered at an early stage. Thus NCD risk factors can be controlled through controlling risk factors and healthy lifestyle such as smoking cessation, balanced diet, diligent physical activity, stress management and others. Counseling and education is conducted by Posbindu NCD officers to improve community knowledge and ability to control NCD risk factors. Then the results of the examination will be followed up with counseling from the coach. In certain cases, when there are participants of Posbindu NCD who can not attend due to illness, cadres and builders NA of 1 and NA of 7 will make a home visit which then provide a referral if health conditions require handling in the health center or hospital.

The proportion of NCD risk factors was calculated by comparing NCD risk PosBindu participants with NCD risk compared to the number of posbindu participants examined by the NCD Posbindu juknis. Based on the number of visits a year Posbindu NCD NA of 1 is known from 592 visits 16% of participants

receive education and recommendation therapy in lowering blood pressure, 47% with normal blood pressure should have received education to keep blood pressure normal, and 16% with low blood pressure obtain education and therapeutic recommendations to normalize blood pressure. Within a year of activity Posbindu NCD found (39 people) 7% of participants who have been diagnosed with diabetes. Risk factors that have been recorded were then followed up with treatment (20%) or referred (2%).

During the visit of Posbindu NCD NA of 7 it was found that from 285 visits 40% of the participants received education and recommendation therapy in lowering blood pressure, 55% normal blood pressure received education to keep blood pressure normal, and 9% received education and therapeutic recommendations to normalize blood pressure . Activities Posbindu NCD found 10% of participants who have been diagnosed with diabetes within a year. Risk factors that have been recorded were then followed up treated (29%) or referred (1%). The implementation of Posbindu NCD becomes gate keeper in preventing the occurrence of disease or complication through early detection. In NA of 7 more participants had more risk factors for body mass index, high blood pressure, and diabetes. This indicates that attendees are participants with risk factors and have been diagnosed with illness.

Communication factors play an important role in delivering health messages and follow-up results of medical examinations. Innovation is driving the emergence of new ideas that are able to develop the integrated implementation of Posbindu NCD (food supplement, drug distribution, religious citation) and impact on changes in community behavior in improving health efforts that is to manage risk factors that have been detected so as not to worsen and maintain the continuity of healthy lifestyle (the result of education and consultation with health workers every month). Partnership is important for all elements to be a part of achieving the objectives of Posbindu NCD (Role of Village Head, NA head, community leaders, religious leaders, the wife of NA head and the community).

Management, communication, partnership, and innovation factors are mutually related to each other in supporting the implementation of NCD Posbindu that is appropriate for the purpose. Implementation of Posbindu NCD in NA of 1 and NA of 7 indicates that good human resources management supports optimal role of cadres as a driving force that fosters a sense of belonging to the successful implementation of NCD

Posbindu program so that unpaid cadres are ready to work fulfilling joint responsibility. Good fund innovation in enhancing management supports participant visits. In addition to being supported by funding, innovation is also supported by sustainable partnerships so that the cadres are able to develop other activities as a community attraction. Partnerships can work with good communication. The most important communication is the communication between the coach and the cadres so that there is a unity of purpose cadres between the and the puskesmas. Communications with community cadres also support the increase in the number of visits. Poscindu NCD cadres NA of 1 has good communication with local area or community leaders and able to convey urgency and purpose of Posbindu NCD implementation resulting in shared vision between cadres with community leaders. This supports the participation of various parties in implementing NCD Posbindu in NA of 1.

CONCLUSION

The successful implementation of Posbindu NCD is influenced by management (human resources, funds, facilities), innovation, communication partnership. The existence of these four factors is more optimal in Posbindu NCD with good performance (most visited indicator) compared with Posbindu with poor performance (lowest indicator of visit). Management / human resources management, funds and facilities support the implementation of Posbindu NCD. Voluntary cadres, ownership of Posbindu own building, the existence of fixed funds, good communication, and the existence of partnership and innovation in the implementation of NCD Posbindu in NA of 1 has increased the visit of Posbindu NCD to be the highest. Intense communication also ensures the implementation of Posbindu NCD. Posbindu NCD NA of 1 with the most number of visits has advantages in partnership factors that support the innovation in the implementation of Posbindu NCD. This research can be continued by exploring other elements that can become new insights in improving the effectiveness of Posbindu NCD program.

Based on the result of the research, it is recommended to optimize the management factor, innovation, communication and partnership so that the potential in society can be developed for the sake of public health development. Stakeholder Posbindu NCD is able to facilitate the program well through instrument optimization, Posbindu clear measurement of success,

optimization of follow-up of recording results, and building partnerships (especially in Puskesmas that are close to industrial areas) with universities in community service.

RECOMMENDATION

The implementation of Posbindu NCD is supported by a more complete guide and a clear measurement tool to be able to be applied to Puskesmas in conducting the evaluation. The encouragement from government nationally can be realized through advertisement and socialization by adjusting to the current technological developments both through social media and printed media. The implementation of Posbindu NCD is one of the programs that is able to become an evidence based data which can be analyzed and followed up by Dinas Kesehatan, hence, a complete data is needed to be used as the evidence in determining a policy. The role of Puskesmas becomes a direct intermediary in encouraging the optimization of management, communication, partnership and innovation factors. Appreciation towards Puskesmas officers who directly involved in the field must be done. Inadequate innovation and partnership factors need to be pushed by Puskesmas through several ways as a trigger for cadres (through CSR, private practice, local people who work as health workers, health community). Therefore, it is also necessary for the officers to be creative and good at communicating with the community, so they can easily mobilize the community. Universities become partners in developing new ideas, on the other hand, Posbindu NCD itself can also be a learning tool for the students.

Acknowledgement

The authors would like to acknowledge the invaluable help from informans of Bogor City Health Office especially drg. Firy, and of Pasir Mulya Puskesmas especially Pak Iwan and Bu Tati.

REFERENCES

- Erlina, L. (2008). Pengaruh Senam Diabetes Terhadap Kadar Glukosa Darah Pasien DM Tipe 2 di Perkumpulan Pasien Diabetes RSU Unit Swadana Daerah.
- Fauzia. (2013). Analisis Pemanfaatan Pos Pembinaan Terpadu Penyakit Tidak Menular di Wilayah Puskesmas Warung Jambu Kota Bogor Tahun 2013. Tesis, Universitas Indonesia.
- Fountaine, T. (2016). Tackling Indonesia 's diabetes

- challenge: Eight approaches from around the world, (May).
- Frieden, T. R. (2014). Six components necessary for effective public health program implementation. *American Journal of Public Health*, 104(1), 17–22. https://doi.org/10.2105/AJPH.2013.301608
- IPKM, T. P. (2014). *Indeks Pembangunan Kesehatan Masyarakat Tahun 2013*. Jakarta.
- Islam, N. S., Zanowiak, J. M., Wyatt, L. C., Chun, K., Lee, L., Kwon, S. C., & Trinh-Shevrin, C. (2013). A randomized-controlled, pilot intervention on diabetes prevention and healthy lifestyles in the New York City Korean community. *Journal of Community Health*, 38(6), 1030–1041. https://doi.org/10.1007/s10900-013-9711-z
- Ivancevich, J. M., Konopaske, R., & Matteson, M. T. (2007). Perilaku dan Manajemen Organisasi. (W. Hardani, Ed.). PT Gelora Aksara Pratama.
- Kementerian Kesehatan RI. (2013). *Kementerian Kesehatan Republik Indonesia*.
 https://doi.org/351.077 Ind r
- Lim, J., Chan, M. M. H., Alsagoff, F. Z., & Ha, D. (2014). Innovations in non-communicable diseases management in ASEAN: a case series, *I*, 1–10.
- Longest, J. B. B. (2015). *Health Program Management*. San Francisco: Jossey-Bass.
- Maryati, H. (2015). Faktor Penentu Efektivitas Upaya Kesehatan Bersumberdaya Masyarakat (UKBM) Posyandu Pada Dinas Kesehatan Kota Bogor Tahun 2015. Tesis, Universitas Indonesia.
- Muninjaya, A. G. (2004). *Manajemen Kesehatan*. Penerbit buku kedokteran EGC: .
- Rahajeng, E., Renowati, T. S., Rivai, L. B., Yosephin, P.,
 Palupi, N. W., Mustikawati, D. E., ... Sianipar, D. R.
 (2015). Petunjuk Teknis Penyelenggaraan Pos Pembinaan Terpadu Penyakit Tidak Menular(Posbindu NCD). Jakarta: Kementerian Kesehatan RI.
- Rahajeng, E., Renowati, T. S., Yosephin, P., Palupi, N. W., Rivai, L. B., Mustikawati, D. E., ... Sianipar, D. R. (2014). Pedoman Umum Pos Pembinaan Terpadu Penyakit Tidak Menular. Jakarta: Kementerian Kesehatan RI.
- Rahmawaty, A. (2014). Lansia di Wilayah Kerja Puskesmas Bantargebang Bekasi Tahun 2014. Universitas Indonesia.
- Sulaeman, E. S. (2011). *Manajemen Kesehatan Teori dan Praktik di Puskesmas*. (B. Murti, Ed.) (2 ed.). Yogyakarta: Gajah Mada University Press.