

Evaluation of Promotive and Preventive Strategies in Control Non Communicable Diseases (NCDS) in Indonesia

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Abstract.

Non- communicable diseases (NCDs) have be one of challenge health public the largest in Indonesia and the world, along with with transition epidemiology , changes pattern consumption , style life sedentary , and aging population. Increasing prevalence of diabetes mellitus , hypertension , disease cardiovascular disease lungs chronic and cancer demand strengthening promotive and preventive strategies as approach main in PTM control. However,the implementation various promotive and preventive programs often more oriented towards achieving administrative output compared to change behavior and impact measurable health ,so that need systematic, comprehensive ,and ongoing strategy evaluation .This article aim For study in a way conceptual evaluation of promotive and preventive strategies in PTM control ,including concept and urgency evaluation , principles health strategy evaluation ,relevant evaluation models and learning from studies case national and global. The methods used is approach conceptual through synthesis literature key in the field health strategy evaluation and analysis reflective to studies case implementation policy health . Study results show that effectiveness of promotive and preventive strategies No only determined by the scope of the program, but is greatly influenced by the relevance intervention with need society , quality implementation , capacity source Power human resources , availability of valid data, and governance and coordination cross sector . This article emphasize importance implementation principle evaluation based evidence , participatory , fair , efficient , and sustainable , as well as evaluation model integration such as Logic Model, CIPP, Donabedian, and Balanced Scorecard in cycle policy health . Findings This implies the need for strengthening monitoring and evaluation system , improvement evaluator capacity , as well as shift orientation evaluation from just output achievement towards measurement of health outcomes and impacts public.

Keywords : Evaluation of strategy; health society; disease No infectious; preventive and promotive.

I. INTRODUCTION

Non- communicable diseases (NCDs) have experience significant improvement in a number of decade last and present become reason main morbidity and mortality Good globally and in Indonesia [1]. The World Health Organization (WHO) estimates that that more of 70% of global deaths are caused by NCDs, with disease cardiovascular , diabetes mellitus , cancer , and other diseases breathing chronic as contributor main [2]. In Indonesia, various survey health national like Riskesdas and the Indonesian Nutritional Status Survey show trend improvement prevalence hypertension , diabetes, obesity , dyslipidemia , and factor risk behavior like smoking , excessive salt consumption , lack of activity physical , and patterns Eat No balanced [3]. Shift pattern disease This reflect transition epidemiology triggered by urbanization fast , industrialization , globalization food , change structure work , as well as transformation demographics going to an increasingly diverse society aging [4,5]. Transition epidemiology bring implications fundamental to system health . If in the previous era focus main service health is control disease contagious and problematic health mother and child , then moment This system health sued For adapt face disease chronic nature term long , requires maintenance sustainable , coordination cross services , as well as approach multidisciplinary [6]. PTM does not only impact on individuals through decline quality life , disability , and death premature , but also causes burden big economy for family and country [7].

Costs direct maintenance medical , costs No direct consequence lost productivity , as well as pressure to financing National Health Insurance (JKN) is increasingly increase along with increase amount PTM sufferers [8]. Therefore that , approach curative solely No Again adequate , and strengthening of promotive and preventive strategies become must in policy health [9]. In three year Lastly , the PTM trend shows trend consistent improvement Good both globally and internationally national . WHO report shows

that PTM contributes more of 70% of global deaths and continues experience improvement proportion in burden world diseases [1,2,25]. In Indonesia, the compilation of survey data national show trend improvement prevalence factor risk main PTM, including hypertension , obesity , and disorders related metabolic with pattern modern life [4,5]. In addition , the document policy national also emphasized that improvement factor risk behavior like not enough activity physical and pattern Eat No Healthy Still become challenge main control of PTM [6]. The trend show that the burden of PTM is not only increase in a way absolute , but also increasingly complex in a way determinant , so that strengthen urgency strengthening promotive and preventive strategies as approach main PTM control .In policy health nationally , the Indonesian government has put control of PTM as priority strategic , aligned with commitment towards the Sustainable Development Goals (SDGs), especially target 3.4 which aims lower one third death premature due to NCDs in 2030 [10].

Various initiative has developed , including the Healthy Living Community Movement (GERMAS), strengthening promotion Clean and Healthy Living Behavior (PHBS), screening factor NCD risk in facilities primary health , integration service promotive-preventive to in the Healthy Indonesia Program with Approach Family (PIS-PK), as well as development system PTM surveillance based on routine data and surveys periodically [11,12]. Community Health Center as the vanguard service primary health has role central in implementation of the strategy through education health , counseling behavior , activities based community , as well as detection early and referral case risky high [13].Although Thus , the implementation of promotive and preventive strategies for NCDs in the field face various challenge structural , technical , and social . From the side structural , limitations source Power man trained in promotion health , burden Work power high health , limitations budget operational , as well as Not yet optimally integration system information health hinder program effectiveness [14]. From the side technical , many Community Health Center Still focused on service curative , temporary activity promotive-preventive often considered as burden [15]. In addition , PTM data is often fragmented , not real-time, and not yet fully utilized For taking decision based evidence [16].From the side social and cultural , low literacy health society , less social norms support style life healthy , and influence environment obesogenic (simply access to food high in sugar, salt, and fat) complicates effort change behavior [17].

Inequality access service between regions, especially between urban and rural , as well as between area advanced and lagging behind , also widening gap results health [18]. In many cases , promotive-preventive programs Still oriented towards achieving administrative output , such as amount counseling , distribution material education , or coverage screening , without adequate measurement to change behavior , decline factor risks and impacts health term length [5,6].In context here it is evaluation of the strategy becomes very important and strategic instrument . Strategy evaluation is not just measure success or program failure , but functioning as mechanism learning organization , accountability public , and basic repair policy [7]. Good evaluation must capable evaluate relevance intervention to problem health priority , effectiveness in reach goals , efficiency use source power , justice distribution benefits , as well as program sustainability in term length [13,14]. In addition , the evaluation need nature participatory with involving power health , program managers , stakeholders interest cross sector , as well as public as recipient benefits [11,12].Therefore that , is necessary framework comprehensive , data -based evaluation evidence , adaptive , and sensitive to context local . Framework the must capable integrate various evaluation models , such as the Logic Model, CIPP, Donabedian, and Balanced Scorecard, as well as accommodate indicator performance both leading and lagging [13,14]. With approach systematic and continuous evaluation , it is hoped that the promotive and preventive strategies for NCDs will not only increase coverage services , but also generates change sustainable behavior , reducing factor risk , and ultimately contribute real to improvement degrees health public in a way equitable and just [15,16].

II. METHODS

This article use approach study conceptual with design study literature integrated (integrative literature review) which is combined with analysis reflective to studies case implementation policy health in Indonesia and globally [9,10]. Approach This chosen Because objective main study is develop framework

evaluation of promotive and preventive strategies in control of PTM, not For test hypothesis empirical certain [6]. With Thus , the method This allows synthesis comprehensive to concepts , theories , and practices evaluation of relevant health strategies [7].Stage First study is identification and selection source literature . Literature main used covers document policy international (WHO), book text management strategic , articles journal reputable in the field policies and systems health , as well as report evaluation of health programs in Indonesia [1,2,3,4]. Search literature done through academic databases such as Google Scholar, PubMed, and Scopus with keywords : " strategic evaluation in health", "non-communicable diseases evaluation", "promotive and preventive health strategies", and "health policy evaluation in Indonesia" [9,10]. Stage second is data extraction and organization . Each source literature analyzed For identify definition key , principle evaluation , evaluation model , indicators performance , as well as findings main related success and challenges implementation of health strategies [5,6].

Information the Then categorized to in themes main , namely : (1) concept and urgency health strategy evaluation , (2) principles evaluation , (3) evaluation model , and (4) learning from studies case [7,8].Stage third is synthesis conceptual . At this stage this , the findings from various source combined For build framework coherent and applicable evaluation for promotive and preventive strategies for NCDs [13,14]. The evaluation model analyzed includes Logic Model, CIPP, Donabedian, and Balanced Scorecard in context health , with compare advantages , limitations and relevance to evaluation of the PTM program at the school level primary care [13,14].Stage fourth is analysis studies case study . The case study reviewed covers evaluation of the national stunting reduction strategy in Indonesia, digitalization service Community Health Centers , global COVID-19 control strategies , and Implementation of Universal Health Coverage (UHC) in Thailand [11,12,15,16]. Learning from cases This used For enrich understanding about factors success and failure in implementation policy health [7,8]. Validity conceptual study guarded through triangulation source literature , consistency argumentation , as well as relatedness logical between concepts , models, and findings cases [9,10]. Although study This nature conceptual and not using primary data, approach This give base strong theoretical For development framework evaluation of promotive and preventive strategies for NCDs operational and contextual [6,7].

III. RESULT AND DISCUSSION

Study results conceptual and synthetic literature show that evaluation of promotive and preventive strategies in control Non- Communicable Diseases (NCDs) require approach multidimensional integrating principles , models, indicators , and learning from practice policies at the level national and global findings main study This can grouped to in five sub-themes big : (1) principles evaluation as runway normative , (2) indicators performance as tool measure , (3) evaluation model as framework analytical , (4) learning from studies cases , and (5) implications practical for strengthening evaluation of PTM strategies in primary care .

1. Principles Evaluation as Foundation Normative

Analysis show that nine principle evaluation relevance , effectiveness , efficiency , fairness , sustainability , accountability , based evidence , participation , and improvement sustainable , not just guidelines conceptual , but become standard quality evaluation policy health . Principles relevance demand harmony between promotive and preventive strategies with profile epidemiology of NCDs, needs group vulnerable , as well as priority policy national and global. Many interventions fail No Because poor implementation , but Because program design no in accordance with context social , cultural and economic targets . For example , a digital health campaign without consider digital literacy for the elderly potential widen gap access information health .Principle effectiveness confirm that evaluation must outcome and impact oriented , not only output. Many PTM programs are successful achieve administrative targets such as amount counseling or coverage screening , however No show change significant behavior or decline factor risk . Therefore that , indicator evaluation need covers change behavior (eg improvement activity physical , decline salt consumption), results clinical (decrease) pressure average blood of the population), as well as impact term length (decrease) stroke incidents and disease heart).

Principle efficiency become the more important in context limitations budget health and stress JKN financing .Evaluation must considering the cost-effectiveness of intervention promotive-preventive

compared to approach curative . Global studies show that intervention like subtraction salt consumption , policy excise tobacco , and promotion activity physique own ratio excellent cost - benefit compared to maintenance complications of PTM. However , the implementation policy the often hampered by resistance industry and interests politics .Principle justice emphasize that evaluation No only evaluate average success , but also distribution program benefits . Inequality access service health between urban and rural , as well as between group social economy , must become consideration main . Evaluation need identify whether group prone to like elderly , people with disabilities disabilities , and society income low — really get benefit from promotive-preventive strategies.

Principle sustainability underline importance consider aspect financial , institutional , and social in evaluation . Many health programs based donor projects show results positive term short , but No continue after funding ended . Therefore that , evaluation must evaluate can the PTM program integrated to in routine health center system , supported by regulations , as well as accepted by society .Principle accountability and transparency put evaluation as mechanism accountability public on Use of health funds . Reporting open performance , program audits , and involvement of the DPRD and the community become element important in strengthening governance . Meanwhile that , the principle based proof demand use of valid and reliable data , including PTM surveillance , record medical electronics , and results study scientific. Principle participatory emphasize involvement stakeholders interest power health , program managers , communities , and sectors related in the evaluation process . Approach This increase relevance findings and feasibility recommendation policy . Finally , the principle repair sustainable put evaluation as a cyclical process through Plan–Do–Check–Act (PDCA) approach , so that the strategy can Keep going customized with dynamics problem health .

2. Performance Indicators : Leading and Lagging Indicators

This study confirm importance use combination of leading and lagging indicators in PTM strategy evaluation . Leading indicators function as signal beginning success or program failure , so that allows adjustment fast . For example covers coverage PTM screening , availability drug essential , compliance power health to SOP, as well as amount training promotion health . Indicators This can controlled by the program manager and relevant for routine monitoring.In contrast , lagging indicators measure results end after the program is running , such as prevalence hypertension controlled , numbers stroke incident , or level death consequence disease cardiovascular . Although more difficult changed in term short , indicator This important For evaluate impact real strategy towards health status population . Combination second type indicator allows further evaluation comprehensive , connecting processes with results .

3. Evaluation Model as Framework Analytical

Four evaluation models The main Logic Model, CIPP, Donabedian, and Balanced Scorecard are proven each other complete in assessing promotive-preventive strategies for NCDs. The Logic Model helps map connection causal between input, process, output, outcome, and impact, so that make things easier identification point weak implementation.This model is very useful in stage planning and evaluation formative. The CIPP (Context, Input, Process, Product) model provides approach holistic For evaluate suitability program context , adequacy source power , quality implementation and impact results.In the context of PTM, evaluation context evaluate is the strategy aligned ? with profile epidemiology local ; input evaluation assesses availability of human resources, budget , and infrastructure ; evaluation of the assessment process quality implementation and evaluation product evaluate change behavior and health status.

The Donabedian Structure, Process, Outcome model is relevant For evaluate quality service health . Structure covers facilities , human resources, and systems information ; the process includes method service given ; and outcomes include results health as well as satisfaction patient . This model is very applicable For evaluation at the Community Health Center , especially in evaluate quality service PTM screening and counseling. Balanced Scorecard in context health allows evaluation multidimensional performance , including perspective finance (efficiency budget), customer (satisfaction patients), internal processes (quality services), as well as learning and growth (capacity HR). Approach This help linking strategy with indicator measurable operations .

4. Learning from Case Study

Analysis studies case national show that the success of a health strategy depends heavily on the quality Implementation and governance . Evaluation of the national stunting reduction strategy reveal that improvement budget just No enough ; coordination cross weak sector at the level area become inhibitor main . Learning This relevant for PTM control which also requires collaboration multisectoral , for example with sector education (education health), transportation (space public For activity physical), and environmental (regulation food Healthy).Case digitalization service Community Health Center show that innovation technology can increase efficiency and accuracy of data, but potential widen gap If No accompanied by inclusive strategies.Elderly and groups educated low face obstacle in access digital services , so that evaluation must consider principle justice and participation . Digital and design mentoring friendly application users become recommendation key.From a global perspective , the evaluation of COVID-19 control strategies shows that system strong surveillance , response fast , and distribution fair vaccines is factor success main . This lesson can applied to PTM through strengthening surveillance factor risk , cross-data integration services and equality access intervention promotive-preventive . Meanwhile that , deep Thai experience implementation of Universal Health Coverage (UHC) confirms importance balance between access , quality , and sustainability fiscal .

5. Implications for Strengthening Evaluation of PTM Strategy in Primary Care

Based on the above findings , some implications practical can formulated . First , evaluation of the PTM strategy is necessary integrated in cycle policy since stage planning , implementation , to program revision . Evaluation formative and summative must walk parallel with routine monitoring.Second , strengthening data system becomes prerequisite main . Record integration medical electronics , PTM surveillance , and performance dashboard allows analysis based more evidence accurate and real-time. Third , the increase evaluator and human resource capacity health in data analysis , methods evaluation , and use indicator become need urge .Fourth , the approach participatory must expanded , involving community and non- health sectors in planning and evaluation . This increase legitimacy and effectiveness recommendation policy . Fifth , orientation evaluation must shift from achievement of administrative output going to meaningful measurement of health outcomes and impacts .In a way overall , results study This confirm that evaluation of promotive and preventive strategies for non-communicable diseases (NCDs) is not just activity technical , but instrument strategic For transformation system health towards a more model preventive , based evidence , fair , and sustainable . Without strengthening evaluation , efforts control of high-risk NCDs not optimal and not contribute significant to improvement degrees health public .

6. Evaluation of Implemented Strategies

Analysis to various promotive and preventive strategies for NCDs that have been implemented show results that are partial . National program such as GERMAS, PTM screening in primary care , and strengthening approach family has increase process indicators , such as coverage screening and activities education health [6]. However , if assessed use outcome indicators , improvement factor risk population Still happen as shown in survey national health and reports burden global disease [4,5,25]. This show that improvement program activities not yet fully followed changes in health status population .Evaluation quality model based service show that part big facility primary care has own structure adequate basis , including power health and facilities screening , however results health patient Still not optimal [14,18]. Condition This signify existence gap between availability service and effectiveness utilization by the community . Obstacles frequent implementation reported covering limitations human resource capacity , suboptimal data integration , and low literacy health society [19,20].From the perspective policy global health , experience various countries show that success of control strategies disease chronic is highly dependent on the strength of governance , surveillance , and coordination cross sector [26,27]. Findings This in line with WHO report which emphasizes that intervention promotive-preventive own effectiveness tall in a way population , but need support policy structural to have an impact significant [16,17]. With Thus , evaluation towards the strategy that has been walk show that approach promotive-preventive Already be in the direction the right policy , but Still need strengthening implementation , integration system , and impact orientation term long .

IV. CONCLUSION

Evaluation of promotive and preventive strategies in control Non-communicable diseases (NCDs) are a fundamental pillar for success transformation system health going to a more approach preventive, based evidence, and results-oriented. Findings study This confirm that without systematic, comprehensive, and continuous evaluation, various risky PTM policies and programs walk routinely, administratively, and fragmentarily, but fail produce change behavior, decline factor risks, as well as improving health status public in a way meaningful. Therefore that, evaluation No may positioned as activity addition or mechanism control only, but as instrument strategic For learning organization, accountability public, and improvements policy sustainable. Increasing trend Non-Communicable Diseases in three year final confirm that PTM is not only problem epidemiological, but also challenges strategic for sustainability system health. Data shows that although various promotive and preventive strategies has implemented in a way national, improvement factor risk main Still happened, so that signify existence gap between program achievements and impacts health resulting from the condition This confirm importance strategy evaluation as instrument main For ensure that policy No only walk in a way administrative, but truly effective lower burden disease.

This study show that quality evaluation of PTM strategy is very much determined by the implementation nine principle main relevance, effectiveness, efficiency, fairness, sustainability, accountability, based evidence, participation, and improvement sustainable. Principles the each other complete and must implemented in a way integrated, not partial. Evaluation that only focus on effectiveness without consider justice potential widen inequality health; on the other hand, evaluations that emphasize participation without strong data support risky produce normative recommendations but not enough operational. With Thus, integration principles evaluation become key For produce holistic and meaningful assessment. From the side methodological, use combination of leading and lagging indicators is proven crucial For linking implementation processes with results health. Leading indicators enable detection early problems and adjustments fast, while lagging indicators provide description impact term medium and long. Approach This it is important that the evaluation No trapped in logic achievement of administrative output, but truly capable evaluate change behavior, control factor risk, and decline burden disease. The study also confirmed that No There is one perfect evaluation model For all context.

Logic Model, CIPP, Donabedian, and Balanced Scorecard each have their own strengths and limitations, but when used in a way complementary, all four can give framework comprehensive analytical. Logic Model helps map chain causal program, CIPP assesses suitability context and quality implementation, Donabedian assessed quality services, and the Balanced Scorecard links performance with aspect finance, processes, and development capacity. The integration of these models is highly relevant For evaluation of promotive-preventive strategies for NCDs at the level primary care. Learning from studies case national and global strengthening argument that success of health strategies No only determined by the size budget, but by the quality of governance, coordination cross sector, capacity source Power humans, as well as availability of valid and reliable data. Case the decline in stunting in Indonesia shows importance leadership regions and coordination cross sector; digitalization Community Health Center confirm the need approach inclusive; COVID-19 evaluation highlights role surveillance and justice access; temporary Thailand's experience in UHC emphasizes balance between access, quality, and sustainability fiscal. All learning This relevant and can adapted For PTM control. Implications practical main from study This is the need integration evaluation in all over cycle PTM policy starts from planning, implementation, to program revision.

Strengthening PTM data and surveillance system, improvement evaluator capacity and manpower health, as well as institutionalization mechanism evaluation participatory become prerequisite important. In addition, orientation evaluation must shift in a way firm from output achievement towards meaningful measurement of health outcomes and impacts for public. Going forward, research empirical is very necessary For test and operationalize framework proposed evaluation in context implementation real at the level areas, especially in Community Health Centers. Primary data-based studies, both qualitative and quantitative, can enrich understanding about factors that influence success and failure of promotive-preventive strategies for NCDs. With Thus, strategy evaluation is not only become tool assessment, but truly functioning as a

driving force repair sustainable in system health , in order to achieve degrees health a more diverse society high,even,and just.

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