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Analysis of Monitoring and Evaluation System Development of Smoke-Free Area in Indonesia

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ABSTRACT
The World Health Organization Bulletin data show that Indonesia's compliance score for non-smokers' protection efforts was 0.1 in 2016. This research aims to analyze the need for data, information, and indicators to support the implementation, monitoring and evaluation of Smoke Free Area (SFA) in Indonesia through system analysis. This is an operational research study using the Focus Group Discussion (FGD) and document methods. The research series at early stage in the development of an evaluation and monitoring system, utilizing a system development cycle approach. Data is collected by the SFA task force and the community based on system components. The results of this study show that the entity responsible for conducting the monitoring and evaluation of SFA is the Task Force and community. The new potential data and information that has not been existed in the previous system are community as the potential data source of monitoring SFA, strategic data for SFA including the existence of self-service machines for selling cigarettes, and socialization of SFA regulation, monitoring and evaluation as a strategic activity to improve the result of SFA regulation, institution status of SFA and changes in smoking behavior. The information generated by the monitoring and evaluation system includes the SFA status of the institutions which is used for decision making to support the SFA program and the tobacco control program. Continuous monitoring and evaluation are important to ensure policy effectiveness, identify components for improvement or expansion of policies, and increase stakeholder and public support to strengthen or develop SFA policies.

INTRODUCTION

The data from The Tobacco Atlas in 2021 shows that 1,13 billion people are identified as current smokers.[1] In 2019, over 8 million people died from a tobacco-related disease.[2] Each year, smoking or tobacco-related disease causes 225,700 deaths in Indonesia.[3]

Indonesia is the country with the third largest number of smokers in the world with 31% smoking prevalence in 2021.[1] In 2023, the prevalence of people aged ≥ 10 years who smoked daily was 22.46% and those who smoked occasionally was 4.56%.[4]

The diseases as a result of consuming tobacco are lung cancer, stroke, chronic obstructive pulmonary disease, coronary heart disease, and pregnancy disorders. Smoking also causes a decrease in fertility, an increase in the incidence of ectopic pregnancy, impaired fetal growth, seizures during pregnancy, impaired infant immunity, and increased perinatal mortality.[5] Tobacco is the leading preventable cause of death.[6] The development of tobacco control policies has a very important role in efforts to reduce the prevalence of tobacco-related diseases.[7]

The Ministry of Health of the Republic of Indonesia provids tobacco cessation training in some districts orcities. This program is implemented for NCD program holders at the provincial, district and even health center levels. The training is conducted through a Training of Trainer. Training participants will receive a certificate as a counselor in charge of the UBM clinic. In addition to these efforts, the implementation of a smoke-free policy for indoor public spaces has been implemented since 2009 through the establishment of a Smoke-Free Area (SFA), which is one of the first steps to prevent nonsmokers from secondhand cigarette smoke and encourage active smokers to stop smoking.[8] SFA are prohibited from being used for smoking and tobacco production, sales, advertising, and promotion activities. Based on Law Number 36 of 2009, SFA includes health service facilities, schools, children's play areas, worship places, public transport, and workplace. SFA is established as an effort to protect the public from the risk of health problems due to environmental pollution caused by cigarette smoke. Since 2009, each region in Indonesia has been making regulations regarding SFA in their respective regions, 71.8% districts/cities in Indonesia already had SFA regulations in their regions in 2021, and the initiation continues in regions that have not owned one.[9]

Indonesia is a large archipelagic nation, this condition may become a challenge in the socialization and implementation of smoke-free policies.[10] Evidence shows that the average implementation of SFA throughout Indonesia is 50.83% and the lowest application of SFA is 6.90% of all districts/cities in one province.[11] World Health Organization (WHO) Bulletin data shows that Indonesia's compliance rate for non-smokers' protection efforts was 0.1 (score 1/10) in 2016. Compliance with the implementation of smoke-free regulations has not been introduced in government facilities, indoor offices, restaurants, cafes, pubs, and bars.[12] The distribution of SFA implementation based on the five major islands in Indonesia shows that Java Island has the most areas implementing SFA, while the implementation of SFA in Papua is minimal.[11] Therefore, technology information is expected to support government programs in recording and reporting on the implementation and compliance of SFA in districts/cities.

It is also necessary to continuously monitor and evaluate achievement of goals and observe the process and progress of the activities. Monitoring and evaluation are the processes of collecting data on the realization of programs/activities, reporting, assessing, and evaluating achievements that are carried out in a systematic analysis to describe program components and functions so that program improvements can be carried out well, build effective program models, and program accountability.[13] The results were compared with standards or criteria used to assess program achievement and quality. The purpose of this study is to analyze the need for data, information, and indicators to support the implementation, monitoring, and evaluation of SFA in Indonesia.

Therefore, this study contributes to the development of science and society by proposing a structured and integrated system model for monitoring and evaluating SFA implementation using digital tools such as Context Diagrams, Data Flow Diagrams (DFD), and Entity Relationship Diagrams (ERD). This system analysis is being used to systematically map out data and information requirements tailored to Indone-

sia's diverse local contexts. By integrating best practices from successful regions and identifying critical data points, the study offers practical innovations that can enhance tobacco control efforts and support better policy enforcement nationwide.

MATERIAL AND METHOD

This is an operational research to identify the data and information needed to develop monitoring and evaluation applications for integrated Smoke-Free Areas that support tobacco control programs. This study applied a qualitative approach to explore stakeholders' perspectives, experiences, and expectations related to SFA implementation and monitoring. Data collection was conducted through document studies and Focus Group Discussions (FGD). The research informants are the persons in charge of the Non-Communicable Disease Program at the Ministry of Health, Province Health Office of East Java, District Health Office of Surabaya City, and District Health Office of Batu City. At the time of the study, not all regions in Indonesia had well-documented practices therefore these selected areas served as the most appropriate examples for system development.

The number of informants who took part in the FGD was 8 persons consist of the informants, and 3 persons from the facilitator. During the analysis process, important concepts will be highlighted and codes will be created according to the quotations found in the transcript. The data obtained is described using a systems development cycle approach which is developed into a system model including input, process and output entities. The evidence-based provided about protection regulations are chosen from areas where the implementation and enforcement of SFA that has been going very well, such as City of Surabaya, Kulon Progo Regency, Klungkung Regency, City of Bogor and the City of Depok.

This research series is the development of an evaluation and monitoring system that will be carried out up to the system analysis stage. The system analysis stage is an activity to understand the running system and to identify the data and information required by the system. The system model was described using Context Diagrams, Data Flow Diagrams (DFD) for process flow, and Entity Relationship Diagrams (ERD) for database structure. This research was approved by the ethics committee of Faculty of Public Health Universitas Airlangga with letter number: 151/EA/KEPK/2022.

RESULTS

The list of data collected is presented in Table 1. The results of the data collected and analyzed yielded information about the description of the implementation of the SFA in the monitored institutions and developed with the new potential data and information that had not been existed in the previous system. Some of the health officers concerns are about the socialization and the role of key-person in the community to help spread the awareness about the regulation (Table 1). It shows that the socialization of SFA regulations has not been carried out well, so that needs to be optimized. Moreover, local governments are very dependent on the existence of regulations in their respective regions so that the existence of regional regulations related to SFA is very important for them to implement smoking bans in 7 public areas. This information is reported to the Regional Health Office as the institution authorized to monitor and evaluate SFA.

The regulations or data sources include Surabaya City Regional Regulation No. 2 of 2019,[14] Klungkung Regency Regional Regulation Number 1 of 2014,[15] Depok City Regional Regulation Number 3 of 2014 and No. 2 of 2020,[16,17] Surabaya Mayor Regulation No 110 of 2021,[18] Bogor City Regional Regulation No 10 of 2018,[19] Official report of the Surabaya City SFA Enforcement Task Force. These rules and sources produce instruments and indicators for the implementation of SFA (Table 2).

Based on the results of FGDs and document studies, the data collected includes SFA implementation data described using DFD which consists of system components including input, process, output and outcome (Figure 1). The entity of the SFA monitoring could be SFA task force and community. The entity will be responsible for collecting data related to the characteristics and results on the implementation of SFA monitoring at each facility or place. In the data collection process, there are several

stages such as the input data that needs to be monitored, the process after monitoring, the output of the data that has been collected, and the outcome of the assessment results. The entire data will be analyzed into information related to the description of SFA in the facility, and reported to the district health office. The approach that being used in the research accommodated the new potential data and information that has not been existed in the previous system. The new information include community as the potential data source of monitoring SFA. The DFD also shows the new strategic data for SFA, including the existence of self-service machines for selling cigarettes, and socialization of SFA regulation. The DFD also shows there are monitoring and evaluation as a strategic activity to improve the result of SFA regulation. The new information obtained from the DFD is institution status of SFA and changes in smoking behavior.

Table 1. Participants' Quotes from FGD

FGD Guide Sub-Topic	Participant's Quote	Participant's Identity
SFA monitoring and evaluation efforts that have been carried out, what methods are used and also what data are collected	*"Currently we are doing monitoring and evaluation manually with a checklist or google form"*	Informant 1
	"We are developing an app and will move on to it, this app was originally designed to do compliance monitoring of SFA implementations."	
	"*SFA monitoring and evaluation in the province has just focused on schools, so we still don't have data on the other 6 settings. We hope the app that is being developed can cover that."*	Informant 2
	"Since there was a 2019 regional regulation, we have been overseeing it from monitoring to enforcement, I will say that in 2019 we have overseen these 7 areas. There were 1340 areas that we monitor in 2019 with 636 violations."	Informant 3
	"We carry out with a manual checklist that we collect and enter into the NCD website of the Surabaya City Health Office. Coincidentally, the Surabaya Health Office has a NCD website specifically for reports related to NCD, we will make one on the NCD website before the officers enter it directly into ASIK PTM (Healthy Indonesia Application: App system for NCD)."	
Reference for creating monitoring and evaluation instruments	*"We refer to Government Regulation No 109 of 2012 and each regional regulation."*	Informant 2
Need for new data or other data or other information for monitoring and evaluation of SFA	*"In the supervision of the SFA, the hardest thing is when carrying out the supervision. when we want to step down with the checklist, we think it's enough."*	Informant 3
	"There are religious leaders, community leaders can socialize in their respective areas, the public can report when there are violations in their household, we will give our hotline our telephone number, which we have distributed through flyers. Please call, please send chat on that number to take a photo of the violation, where we will act continue and we often get it."	
	"We want to see how committed the agency is with this regional regulation, considering that this regulation has been in effect for 8 months, if we ask whether this regulation has been socialized to the institution"	
	"We are in the process of making a task SFA force decree for City of Batu."	Informant 4

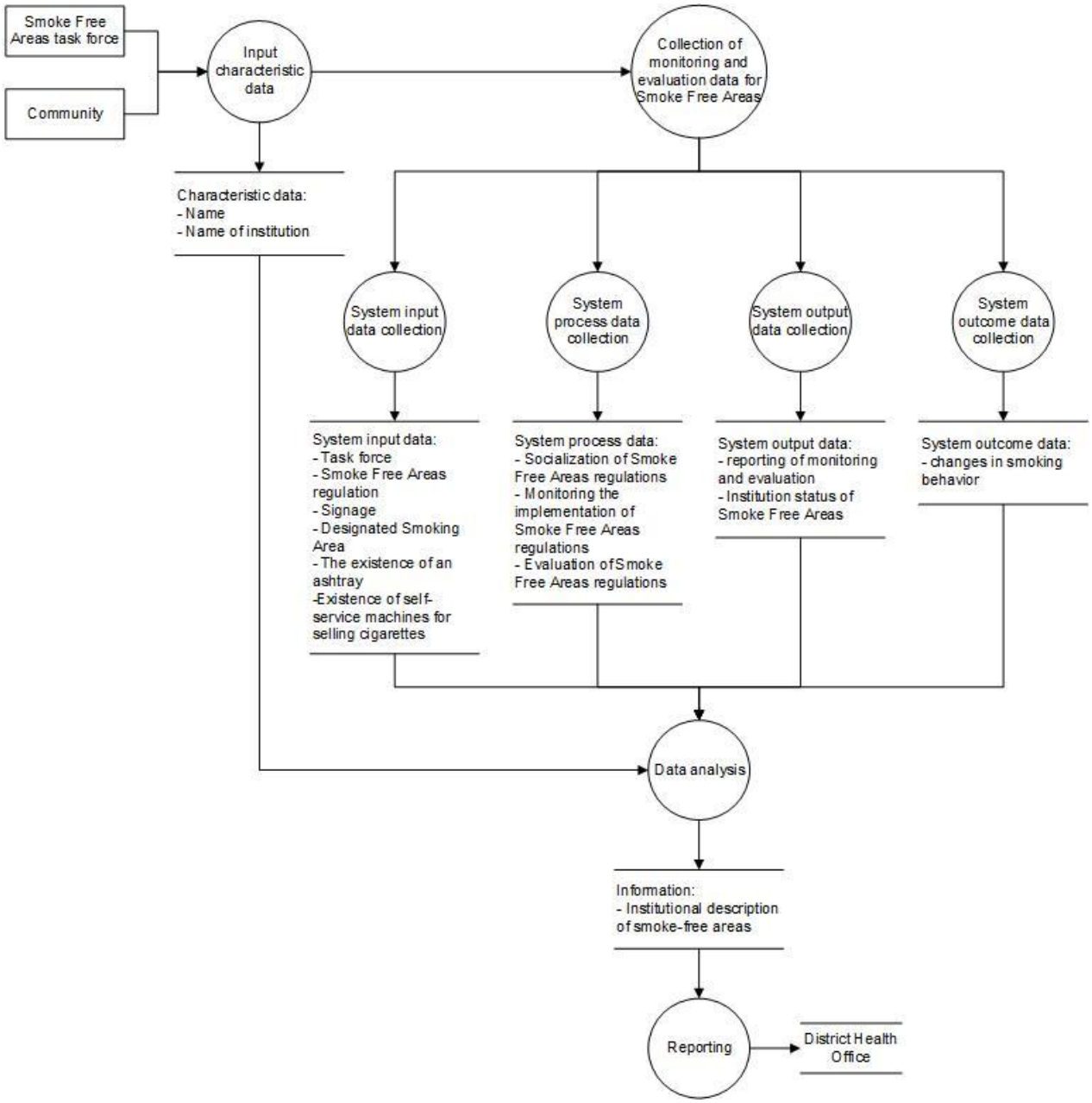
Source: Focus Group Discussions on 2022

Table 2. Variables of the Implementation of Smoke-Free Areas

No.	Element	Variable	Information	Source
	Inputs			
1.	Human	Implementer:	Yes/No	1,2,3,4,5,6,7 &
2.		a. Identity of SFA officer	Description	FGD results
3.		b. Institution of SFA officer	Description	
4.		Public Participation:	Yes/No	
5.		– Identity of informant	Description	
6.		Institutions evaluated:	Yes/No	
7.		– Leader or person in charge of SFA	Description	
8.	Material	SFA Internal Stipulation Letter	Yes/No	7
9.		Signage	Yes/No Amount Form Location Vision access	1,2,3,4,5,6,7
10.		The existence of Smoking Room	Yes/No Amount Form location	1,2,3,4,5,6,7
11.		The existence of an ashtray	Yes/No	7
12.		The existence of machine service to sell cigarette	Yes/No	1
13.	Method	Availability policy about SFA (regional regulation, mayor/regent regulations)	Yes/No	
14.		Availability of Standard Operating Procedures (SOP)	Yes/No	
	Process			
15.		Outreach about the regional regulation, mayor/regent regulations about SFA	Yes/No Media	7
16.		SFA Supervision Activity	Yes/No	1,3,4,5,6
17.		Application of regional regulation, mayor/regent regulations about SFA	Yes/No long time	7
18.		Regulation violation (people smoke, produce tobacco products, selling tobacco products, advertising tobacco products, promotion tobacco products, not providing the smoking room	Yes/No Type	1,2,3,4,5,6
19.		Use cigarette product as event sponsors	Yes/No	3,5,7
20.		Sell smoking products to children under 18 years and/ or in pregnant women	Yes/No	1,3,4,5,7
21.		Community participation	Yes/No	1,2,4,5,6 FGD results
22.		Award to enforcement contributors	Yes/No	1,4,6
23.		Penalty Administrative to violator of regional regulation, mayor/regent regulations about SFA (Reprimand verbal/ Fine/Revocation permission)	Yes/No	1,2,3,4,5,6
	Output			
24.		SFA Enforcement Task Force Official report	Descriptive	7
25.		Report of SFA supervision	Descriptive	6
	Outcomes			
26.		Knowledge about the regional regulation, mayor/regent regulations about SFA	Yes/No	7
27.		Change of smoking behavior (count on cigarettes consumption)	Description	FGD results

Source: 1. Kulon Progo Regency Regional Regulation No. 5 of 2014
2. Regency Klungkung Regional Regulation No. 1 of 2014
3. Bogor City Regional Regulation No. 10 of 2018
4. Surabaya City Regional Regulation No. 2 of 2019

5. Depok City Regional Regulation No. 3 of 2014
6. Surabaya City Mayor Regulation No 110 of 2021
7. SFA Enforcement Task Force of Surabaya City, 2021



Source: Primary Data, 2022

Figure 1. Data Flow Diagram of the Monitoring and Evaluation System for Smoke-Free Area

DISCUSSION

The Indonesian Health Law requires all cities and regencies to establish Smoke-Free Area (SFA) regulations, a mandate in effect since 2009. By 2021, a decade after the obligation was introduced, 369 out of 514 districts/cities (71.8%) had implemented such regulations, while 145 (28.2%) had yet to comply.[9] SFA regulations may be issued as local regulations, requiring collaboration between the government and parliament, or as regent's/mayor's regulations and decrees, created solely by the government.

The Smoke-Free Area regulation represents a key government initiative aimed at controlling tobacco use. Research from the United States

shows that smoking bans not only protect nonsmokers from secondhand smoke but also promote smoking reduction and cessation, with outdoor bans linked to higher odds of smoking reduction (AOR: 1.7) and quit attempts (AOR: 1.8).[20] In Europe, strong national-level tobacco control policies, as measured by the Tobacco Control Scale, have been associated with an increase in voluntary in-home smoking bans across 16 EU Member States. While some studies report reductions in tobacco consumption due to smoke-free laws, others show mixed outcomes.[21] For instance, Spain's smoke-free laws led to a 2% decrease in households with smokers but did not significantly affect household spending on restaurant or bar services.[22] These examples highlight diverse outcomes influenced by the design and enforcement of smoke-free policies.

Responding to public health problems in relation with tobacco consumption, the government's role is urgently needed in efforts to provide clean air and protect the health of passive smokers. SFA are one of the tobacco control efforts to protect non-smokers from exposure to cigarette smoke, especially in public places. In the Framework Convention on Tobacco Control (FCTC), WHO initiates global encouragement for governments or policy makers to implement efforts to protect people from exposure to tobacco smoke in national jurisdictions and actively promote this in indoor workplaces, public transport, indoor public and other public places.[23] Several tobacco control efforts in Indonesia have been made as regulations form, including the Prohibition of Tobacco Advertising, Promotion and Sponsorship (TAPS Ban) and pictorial health warnings on tobacco packaging and labeling. Regulations related to SFA are an element that further emphasizes this effort with the issuance of Law Number 36 of 2009 concerning Health which obliges Regional Governments to establish SFA.[24] This is a mandatory law for local governments in Indonesia to make rules and establish SFA in their respective areas.

Officer Relations and Community Roles

The main requirement for a successful implementation of a program or policy is the role of an initiative, supportive and skilled leader so that it may provide driving force for the policies made. The person in charge or the SFA officer plays an important role in implementing and enforcing the SFA policy. According to the regulations, the SFA Enforcement Task Force is consisting of Civil Servants within the Regional Government and/or individuals appointed by the Regional Head. Officers have a role function as preparing the work plan for implementing SFA supervision and assisting the Head of Service in inventorying SFA location. Moreover, the important task is also to monitor and evaluate SFA, carry out supervision of SFA, and process any violations of the regulation which will be reported to the relevant leader or person in charge. In the implementation, several local governments appointed the Civil Service Police Unit as enforcers of the rules in charge of SFA implementation. Increasing the work capacity of enforcement officers is carried out by providing training and debriefing.

An inclusive process that runs actively, involves and empowers stakeholders will help create and maintain momentum related to the goals to be achieved and the potential for the development of community and organizational participation.[25] Therefore, the role of a good officer may influence community participation, both individuals, groups, legal or business entities, and institutions or organizations by the community to participate in providing support, contribution, or participation in the enforcement of SFA. As an encouragement to community participation, the regional government pays attention to organization or communities that contribute to the implementation of the SFA Regional Regulation by giving awards in accordance with regulations. With the collaboration between elements in the implementation and the attention of regional leaders to the sustainability of SFA, it is expected that the policy may run optimally and achieve the main goal of reducing the prevalence of diseases due to exposure to cigarette smoke, especially in public places.

Existence of the Regional Law

Since the SFA law was passed in 2009, various regions in Indonesia have started to make regulations regarding SFA in their respective regions, but still have not been 100% implemented in all regions.[9] In 2012, out of 497 districts/cities in Indonesia, only 22 districts/cities had local

regulations regarding SFA. On 2014 the number of districts/cities that had regional regulations regarding SFA increased to 49 in 13 provinces (out of 34 provinces in Indonesia).[26] Regional regulations regarding SFA are important as guidelines for controlling cigarette smoke in each region. This is not a regulation that prohibits smoking, but regulates places where smokers may and may not smoke. By this arrangement, people get clean air and avoid exposure to smoking as the risk health problems. The main objective of smoke-free laws and policies is to protect non-smokers from becoming passive smokers. In addition, these rules also motivate and assist active smokers to quit and prevent tobacco used.[27] Policy has basis role for government to take action in tobacco control. Several policies such as cigarette tax increases, comprehensive tobacco product marketing bans, media campaigns, smoking cessation efforts, and graphic health warnings are also oriented towards reducing smoking prevalence.[28] Evidence illustrates that the strongest factor that most influences the reduction in prevalence and preventable death from tobacco is price/tax.[29]

The prediction model shows that with consistent policies based on a strategy to combat the global tobacco epidemic, namely MPOWER, by 2054 smoking prevalence can decrease by 17% with 80,000 deaths prevented.[29] This greatly affects the reach of tobacco products, especially among young adults. The tax increase will have an impact on the accumulation of a decrease in the number of smokers over time and prevent new smokers, especially the young adult group, in the following years.[30] Several countries adopted the FCTC from WHO in efforts to control tobacco, such as in Philadelphia, United States, that passed the Clean Indoor Air Worker Protection Law (CIAWPL) in 2006. This regulation prohibits smoking in almost all workplaces, such as restaurants and shops. The results of implementing this rule show a decrease in the number of adult smokers from 27.3% to 25.2% from 2008 to 2010, and statistically the number continues to decline significantly.[31]

Smoking-Room and Smoking Facilities

Government Regulation No. 109 of 2012 states that smoking room may only be applied for in workplaces and public places facility. A smoking room orsmoking area is an open space that is in direct contact with the outside air. Although this still raises some opinions regarding SFA that there should be no smoking activity at all even in a special room, evidence shows that smoking in a smoking room may reduce the number of cigarettes smoked by smokers compared to not being in a smoking room.[32] Based on FCTC Art. 8, facilities should require all parts of all indoor public places and workplaces to be 100% smoke free. There should not be any indoor designated smoking areas. On the other side, the existence of supporting facilities for smoking activities such as the availability of ashtrays and self-service machines for selling cigarettes out of the smoking room indicates a place does not implement SFA properly. Evidence shows that ashtrays are a strong determinant of the presence of indoor passive smoking ($p=0.017$).[33] The presence of cigarette butts and ashtrays is a form of violation of SFA regulation.[34] Therefore, it is also important for SFA policy enforcement officers to pay attention to the elimination of smoking support facilities as a sign of no smoking in a place.

Signage

Policy outreach and promotion activities increase awareness of the policy among the general public as an enforcement strategy used to increase compliance. Interventions that involve eliminating smoking supporting facilities (ashtrays, automatic cigarette vending machines) and adding no smoking warning signs/ instructions to the area to increase awareness of smoking bans, especially in SFA. Smoke-free signs are a potential way to reduce outdoor smoking in public places.[33] Regulations in each region have regulated provisions regarding the installation of smoking prohibition signs/instructions, for example in terms of content, size and installation. Signs/indications where smoking is permitted must be posted in strategic places that are easy to be seen, the number of the signs is adjusted to the size of the room. In addition, the recommended sign size is more than or equal to 20 x 30 cm with a striking color, so that it visible to the people in the area.[18] In areas with partial smoking bans, signs may facilitate compliance since people will know which areas are not allowed to smoke, despite the fact that the level of adherence to smoke-free

signs/signs in certain services or locations shows little change in behavior individual smokers.[35] There is still little evidence to show the effectiveness of installing signs/no smoking.[36] Nonetheless, evidence shows the adoption of no-smoking signs and posters at universities encouraging students not to smoke in non-smoking areas resulted in a significant reduction in the number of cigarettes smoked on campus and was associated with fewer smoking offenses occurring on campus. This poster campaign relates to the construction of the theory of planned behavior in persuading students to comply effectively with smoke-free policies.[37]

Monitoring and Evaluation

The information of SFA collected by the SFA task force is reported to the leader or person in charge for evaluation and becomes the basis for decision making and selection of the next tobacco control strategy. The information results identified based on the previous system approach, namely in terms of manpower/human resources, materials, methods, processes, outputs and outcomes is a form of developing indicators for implementing SFA that needs to be considered in implementing SFA in each region. Some evidences have shown that smoke-free policies help improve the health of workers and the general public,[38,39,40] as well as make it easier for people who smoke to quit smoking thereby reducing the risk of disease.[27] This shows that the existence of SFA is important for tobacco control efforts, so that data and information from the implementation, reporting and evaluation of SFA are needed to find out what things can be added, corrected or adjusted in an effort to optimize the functions and benefits of SFA.

Continuous monitoring and evaluation are important to ensure policy effectiveness, identify components for improvement or expansion of policies and increase stakeholder and public support to strengthen or develop SFA policies. In addition, SFA monitoring and evaluation provides an overview of public compliance with SFA rules to identify effects on smoking behavior, such as smoking prevalence, motivation to stop, efforts to stop and consumption levels, changes in culture and social norms, changes in knowledge about health risks and attitudes towards cigarette free that may affect the prevalence of disease and its impact on health vulnerability.[41]

Recording and Reporting

In addition, the results of the SFA report contain data and information may describe public knowledge of the existence of policies that regulate smoking activities in public places. Good knowledge will lead to public awareness about smoking hazard and result to the impact on compliance and a positive attitude towards smoke-free regulations. Changes in people's behavior, for example, the amount of cigarette consumption that decreases while in a SFA is the expected result of tobacco control policy. This awareness may lead to public acceptance of the ethics of smoking in public places. Non-smoking policies may change social norms, making smoking less acceptable and reducing the visibility of smoking in public places.[42] This apparently also has an educational impact on the younger generation, since a smoke-free policy in parks or children's playgrounds can prevent them from seeing adults smoking and imitating smoking behavior.[42] Therefore, efforts such as SFA must be an ongoing process and not just an activity carried out once or twice. Societal trends that change from time to time can affect the entire system, so it must be continuously followed and adjusted.[43] Understanding patterns and trends in tobacco use and exposure to tobacco smoke helps policymakers design stronger and more targeted tobacco control policies and allocate adequate resources to implement and support these policies.[43] Good monitoring and evaluation must be understood as a long-term commitment that is well planned and carried out regularly.

CONCLUSION AND RECOMMENDATION

This study identified the essential data components, information requirements, and indicators needed to inform the development of a monitoring and evaluation system that supports the implementation and compliance of SFA policies in Indonesia. Continuous monitoring and evaluation are important to ensure policy effectiveness, identify components for improvement or expansion of policies and increase stakeholder and public support to strengthen or develop SFA policies. The system includes data on the existence of policies and SOPs for activities that regulate smoking activity, the existence of officers or persons in charge of the program, the existence of signage, the existence

of smoking rooms, the prohibition of cigarette sales, sponsorship, promotions and advertisements, the implementation process (socialization, enforcement, sanctions for violations, awards), reporting and data recording, to program monitoring and evaluation. The information generated bythe system is used as a basis for decision making to support the SFA program in particular and the tobacco control program in general.

It is recommended that the identified data and indicators be incorporated into a standardized digital system to facilitate consistent monitoring and evaluation across regions. Strengthening the capacity of local health offices and relevant stakeholders in data collection, reporting, and system utilization is also crucial. Furthermore, the government should consider expanding technical support and resources to regions that have not yet implemented SFA effectively, ensuring more equitable progress nationwide.

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AUTHOR CONTRIBUTIONS

AH and SM designed the study and wrote the protocol, and all authors did the study. AH supervised all the steps in the review process, and all authors interpreted the findings. AH, SM, KDA, MAR and RDN drafted the manuscript, AH and KDA supervised the writing, and MAR provided feedback. All authors read and approved the final manuscript. AH = Arief Hargono; SM = Santi Martini; KDA = Kurnia Dwi Artanti; MAR = Muhammad Aziz Rahman; RDN = Rizma Dwi Nastiti.

CONFLICTS OF INTEREST

All authors have no conflicts of interest to disclose.

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