

## Implementation of Handling Covid-19 Through The Sendai Framework Approach (West Sumatra Case Study)

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### ABSTRACT

Indonesia designated the non-natural disaster Covid-19 as a national in in 2020. The Sendai Framework Agreement (SFA 2015) states that risk reduction efforts must be prioritized, by means of prevention, mitigation and preparedness. West Sumatra Province has disaster management referring to Central Government guidelines from both the BNPB and the Ministry of Health. But it has not yet referred to disaster risk reduction management. The research aims to determine Covid 19 risk management based on the Sendai frame work in West Sumatra Province. The data used is secondary data from research studies of journals and news in chronology. SFA blueprint for predicting the risk of Covid-19 based on Android. The evaluation results of the Covid-19 Risk Prediction Application (M-RCov19) are easy to use and satisfying. Local governments can socialize the M-RCov19 application through focus group discussions (FGD) and training. And it is necessary to issue a policy in the form of a contingency plan (rencon) after the Covid-19 pandemic.

Keywords: Model, Reduction, risk, covid-19, Sendai

### INTRODUCTION

The non-natural disaster of the Covid-19 pandemic which started in Wuhan City, Hubei Province, China at the end of 2019 has resulted in transnational transmission and many fatalities throughout the world until the beginning of 2020. The World Health Organization (WHO) has stated that Covid -19 as a global pandemic (WHO, 2019). Indonesia has also designated the non-natural disaster of the spread of Corona Virus Disease 2019 (Covid-19) as a national disaster based on Decree of the President of the Republic of Indonesia number 12 of 2020 (SETNEG, 2020)

Various countries are trying to implement policies including determining pandemic status and disasters due to viruses to daily habits such as wearing masks, washing hands consistently, maintaining distance, reducing activities in crowds and working and studying from home. The characteristics of each region will provide a picture of different levels of exposure (Adnan et al., 2020). The very rapid spread shows that there are problems in risk communication and preparedness for disasters including COVID-19 (Zhang et al, 2020). This can be seen from the lack of public understanding, lack of coordination of preparedness and limited medical equipment to deal with the COVID-19 pandemic (Wirawan and Januraga, 2020). Apart from that, there are still many Indonesian people who ignore this virus, by not heeding the government's appeals.

In accordance with the Sendai Framework agreement (SFA 2015) that risk reduction efforts must be prioritized, by means of prevention, mitigation and preparedness. One form of this is implementing risk management and disaster risk reduction training. A risk management scheme needs to be built starting from detailed communication about the virus, both from medical knowledge and transmission methods to initial steps to prevent the spread of the virus as early as possible (BNPB-NU, 2015). The Sendai Framework also calls for the need to improve understanding of disaster risk in various dimensions of exposure, vulnerability and hazard characteristics as well as strengthening disaster risk management (BNPB-NU, 2015).

The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030 aims to increase national resilience and community capacity to face disaster risks (UNISDR, 2015). The 2015-2030 Sendai Framework, in its first priority, is understanding risk more than just understanding danger. Disaster risk is dynamic and multidimensional and will always change over time. The COVID-19 disaster shows that the risks faced are multidimensional, namely social, economic, environmental and cultural (UNDRR, 2015).

In line with the international agreement on the Sendai framework (Sendai frame work) for 2015-2030 in disaster risk management, increasing responsibility and involving stakeholders, there is a need for a Covid-19 risk reduction model. By understanding the risk of non-natural disasters from Covid-19, both the community and the government, disaster resilience and preparedness will be increased. This research aims to determine Covid 19 risk management based on the Sendai frame work.

## **METHODS**

This research uses a research and development approach. According to Sugiyono (2011) development research is a research method used to research, thereby producing new products and then testing the effectiveness of these products (Sugiyono, 2011). The data used was secondary data from research studies of journals and news in chronology. Narratives can come from public sources, data journals, news media, and other sources such as transcripts, speeches, or digital media. West Sumatra's response to COVID-19 may be analyzed based on the four SDFRR priorities, as this results in robust and inclusive disaster risk reduction. Data processing and analysis and presented with frequency distribution. Next, a blue print model was prepared to produce a community Covid-19 risk prediction application. The creation of a community Covid-19 risk prediction application based on web-based online risk factors is used as a tool or media that can predict Covid-19 risk factors after the initial design (prototype). After the prototype is completed, a community Covid-19 risk prediction application is developed based on risk factors. The application can be accessed via the internet with the url address: M-RCov19

## RESULTS

### *Priority 1: Understanding the risks of Covid-19*

The research results show that the Sendai Framework policy for reducing Covid-19 risk is not yet based on a comprehensive understanding of disaster risk. Although the West Sumatra regional government has introduced a contact tracing application that provides information to BNPB, namely Ina Risk. However, the socio-economic risks of the pandemic have been neglected, this can be seen from the limited capacity of the West Sumatra government in providing assistance to the community, especially vulnerable groups. Lack of vulnerability assessment of the elderly, people with comorbidities, people with disabilities, homeless people, and people traveling at high risk who are most affected by COVID-19.

### *Priority 2. Strengthen governance to manage risks*

The research results show that the Ministry of Health is leading planning and decision-making efforts to handle COVID-19. The decision by the Central Government to ensure that most of the policies taken by the West Sumatra regional government originate from central policy. The West Sumatra regional government is collaborating with BPBD, regional hospitals, RSUP and provincial and district/city health services. Various participation from stakeholders is also needed to ensure decision making. The West Sumatra regional government issued decisive intervention measures such as early borders, social distancing, wearing masks, contact tracing of suspected cases and mass COVID-19 testing.

### *Priority 3: Resource allocation*

The West Sumatra provincial government allocated existing resources to the health service system such as free treatment for all COVID-19 patients, investing COVID-19 funds for testing and contact tracing of all potentially infected cases. West Sumatra Province implements strict health protocols for prevention and risk reduction measures. Controlling and keeping the number of cases low helps severe cases receive full attention and be treated with qualified health personnel and advantageous equipment. However, risk reduction has not been implemented properly, it has been proven that the number of people infected and dying has increased significantly.

The results of research on 1024 respondents showed that there was a significant increase in investment during the COVID-19 pandemic, not only in the medical sector, but also in the social welfare sector. The 2020 APBD allocation allocated for handling the COVID-19 pandemic in West Sumatra Province amounted to IDR 541.2 billion, which was disbursed in three stages. The use of the budget is both for the health sector and direct assistance to those affected in the health sector; economic and Social Safety Net (JPS) for PCR (Polymerase Chain Reaction (PCR) Facilities, supporting equipment and chemical products (PCR).

**Priority 4: improve preparedness for an effective response and resilient recovery**

West Sumatra Province has good preparedness, response and disaster management amid the COVID-19 pandemic. The main focus is on underprivileged groups. The West Sumatra Provincial Government has not yet planned post-pandemic actions, and there is no recovery plan or continuity plan. This shows that the Sumatra Provincial government has not used the COVID-19 budget for sustainable development and increasing community resilience. Health protocols after the Covid 10 pandemic have been relaxed, people are bored with the Covid-19 situation (49.1%). After the Covid-19 pandemic, it was seen that the involvement of religious organizations was quite good (47.8%), social organizations (57.0%), youth organizations (46.1%), student organizations (57.4%), political party organizations (45.9%), and village/sub-district officers (55.9%) always carry out outreach on handling Covid-19. shows that after Covid 19, people are used to washing their hands (73.3%), the habit of maintaining distance is (34.3%). Currently, if an individual has a high fever, they immediately provide support (87.5%). Respondents' willingness to participate in the post-Covid 19 pandemic vaccine program increased (69.3%). Although there were still respondents who were unwilling because they were not sure about the vaccine (69.3%).

**Determining the Blueprint for an Android-based Covid 19 risk prediction application**

Phase 1 research produced problems and risk measures for Covid 19 in West Sumatra.

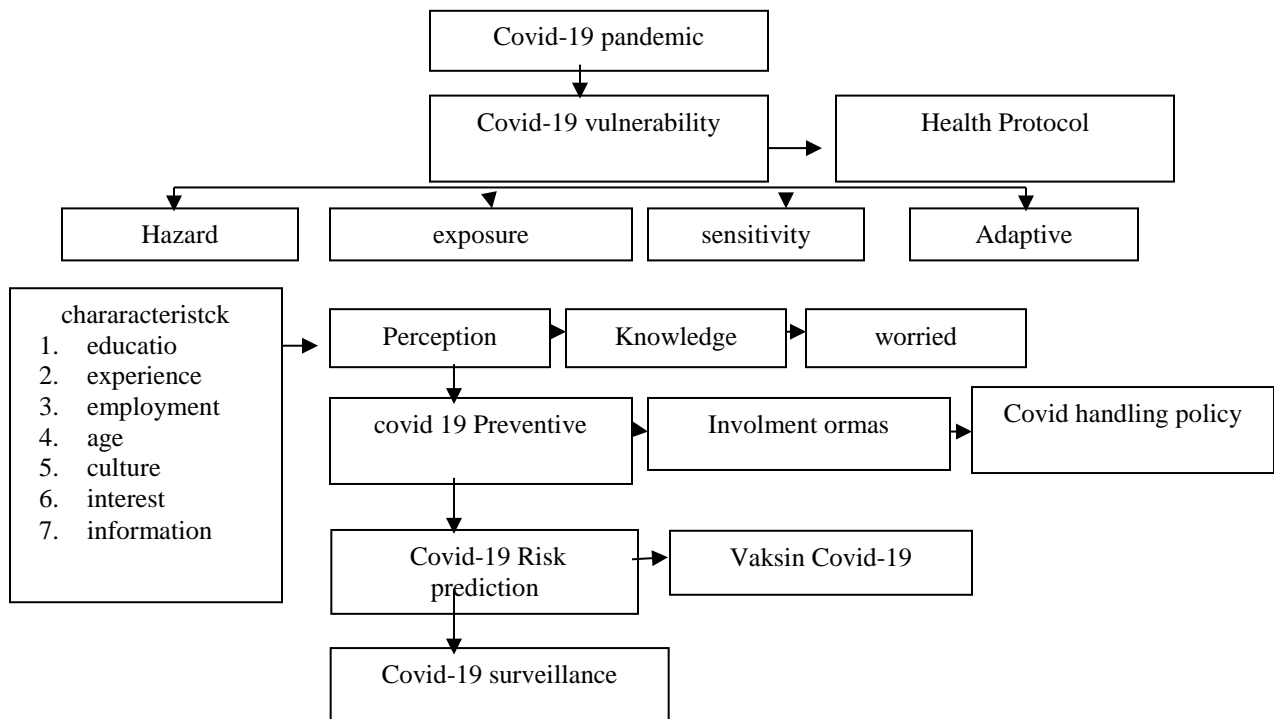


Figure 1 model sendai framework covid 19

Figure 1 shows that people in areas exposed to Covid-19 need tools to predict exposure to Covid-19. So far, the introduction of Covid-19 exposure and its risks has been carried out from information obtained and personal experience, with little use of information tools. So that understanding of risk is limited, the Covid 19 surveillance.

## DISCUSSION

Based on research results, the spread of Covid-19 in West Sumatra province is quite high, even though it is not a densely populated area. In the Covid-19 Risk map based on cases and deaths with graphs of confirmed positive COVID-19 cases presented, it is not always the case that in high density areas there are also high numbers of confirmed positive Covid-19 cases. In this case, location factors and interactions between regions are important factors in the spread of the virus. International trade and travel have the potential to contribute to the pandemic worldwide. This statement is in accordance with the distribution of Covid-19 cases in the Padang City area, which is the capital of West Sumatra province with very high community mobility. Padang, as the entrance to West Sumatra from land, air and sea, is one of the factors causing the high vulnerability of Covid-19 in this city. This shows that population density is a catalyst but is not yet the main factor(Wahyuni, 2021).

People are heeding the government's appeal to temporarily reduce activities outside the home to prevent transmission of COVID-19 and from this research it is also known that people do not really understand COVID-19 and its health protocols. Various efforts have been made by the central and regional governments to overcome the corona virus outbreak. Previously, the government had established Large-Scale Social Restrictions (PSBB) as a strategy to prevent the spread of the corona virus that causes Covid-19. A number of activities involving the public are limited, such as closed offices or agencies, restrictions on religious activities and restrictions on public transportation. Indonesia is in a new normal phase(Buana, 2020). The Carnegie Endowment for International Peace (2020) describes three major weaknesses in the government's approach preventing it from mitigating the global pandemic. First, the government's profound indifference to data. regional leaders and civil society groups (Navanti *et al.*, 2021).

In the study of Luo, Lie, & Prinzen (2020), they were classified into one of 4 contact risk groups, namely (1) The high risk group had a history of contact and fever, (2) The medium risk group had a history of contact but no contact fever. (3) Low risk group without contact history but with fever: (4) Very low risk group without contact history or fever: (Luo, Lie and Prinzen, 2020)

The people of West Sumatra are making preventive efforts not to be infected by Covid 19, by keeping their distance. This is in accordance with the opinion of Ahmed (2018) that the best way to reduce the risk of contracting Covid-19 is by not being directly exposed to the corona virus (Covid-19),

such as close contact with sufferers, touching objects contaminated by cough splashes or the breath of Covid-19 sufferers.(Ahmed, Zviedrite and Uzicanin, 2018). The majority of people in West Sumatra wear masks when gathering with other people, avoid shaking hands with other people, clean their hands with hand sanitizer before touching objects, maintain a distance of 1.5 meters from other people when shopping, praying and working, provide hand sanitizer at the front door. home, exercise diligently, and consume vitamins to increase endurance. In line with research conducted by Yanti, et al (2020) it is also in line with this research where the majority of people in Sumerta Kelod Village(Yanti *et al.*, 2020),

Observing developments in handling Covid-19 in West Sumatra, it can simply be divided into two phases, namely the emergency phase and the change phase. The emergency phase focuses on fulfilling the health service system, while the change phase focuses on social control efforts against the risk of transmission and phasing in the return of socio-economic functions. Entering this second phase, various discourses have emerged, one of which is the New Normal paradigm. In its development, there has been a misperception in the community which translates new normal as a condition that has returned to normal. So in handling Covid-19 it is not enough to prepare health services but also to meet the economic needs of the community after the ravages of the Covid-19 pandemic.

Community discipline to commit to staying at home and carrying out activities from home such as studying, working and worshiping from home can break the chain of transmission of Covid-19(Sari and Atiqoh, 2020). Another research also conducted by Al-Hanawi, et al (2020) regarding Knowledge, Attitude and Practice Towards COVID-19 Among the Public in the Kingdom of Saudi Arabia: A CrossSectional Study stated that the results in their research showed that the majority of the research participants had adequate knowledge. good, optimistic attitude and good practices towards COVID-19(Al-hanawi et al., 2020) Other research related to attitudes towards preventing COVID-19 by Azlan, et al (2020) regarding Public Knowledge, Attitudes, and Practices Towards COVID-19 in Malaysia states that Malaysian people have a good and positive attitude towards controlling COVID-19 (Azlan et al., 2020).

Social Safety Net Strategy The assurance program during the COVID-19 pandemic is a program designed to help poor people affected by the COVID-19 pandemic and is implemented through rescue and recovery stages towards normal conditions. The COVID-19 outbreak has made people more aware of humans' vulnerability to disease. Therefore, healthy living behavior will change for the better, by looking for trusted health insurance. Healthy living behavior is not limited to physical health but also mental health. Various reasons for refusing or doubting vaccines were conveyed by the public in this study. Based on the Sendai Framework, regional capacity assessments are carried out using IKD indicators, which include seven priority focuses which are translated into 71 indicators. Each indicator is translated



into four multilevel questions to measure the quality of achievements of each indicator. The priority focus is: a) Strengthening policies and institutions (consisting of nine indicators); b) Risk assessment and integrated planning (consisting of four indicators); c) Development of information, training and logistics systems (consisting of 13 indicators); d) Thematic handling of disaster-prone areas (consisting of five indicators); e) Increasing the effectiveness of disaster prevention and mitigation (consisting of 12 indicators); f) Strengthening disaster preparedness and emergency management (consisting of 24 indicators); and g) Development of a disaster recovery system (consisting of four indicators).

### ***Surveillance policy***

The post-Covid 19 disease surveillance policy is to carry out surveillance for emerging infectious diseases with respiratory priority which have the potential for outbreaks/outbreaks, especially influenza and corona virus. Integrating and strengthening the influenza like Illness/severe acute respiratory infection (ILI/SARI) surveillance system with Covid-19 surveillance. Ensure involvement and strengthening of networks in efforts to carry out surveillance of emerging infectious diseases with respiratory concerns that have the potential for outbreaks/outbreaks, especially influenza and corona virus. Strengthening collaboration on environmental surveillance and zoonosis surveillance. Develop technical instructions for implementing post-pandemic collaborative surveillance. Carry out advocacy for hospitals and community health centers. Carrying out socialization of the implementation of surveillance activities in laboratories and port health offices. Increasing the capacity of officers implementing surveillance activities by coordinating between the central team, the sentinel surveillance team and the relevant provincial/district/city health services. Strengthening community involvement in efforts to control the spread of disease. Carrying out data recording and reporting. Carrying out data analysis and dissemination of surveillance analysis results provides good feedback for surveillance implementation and recommendations

### **CONCLUSIONS**

The activity of implementing the Sendai framework model through the Mandiri vulnerability prediction application, the evaluation results have been carried out using high understanding and satisfaction. For local regional heads, it is recommended that local regional heads collaborate in making socialization a success in complying with health protocols and the benefits of administering the Covid-19 vaccine to the people of their region and also providing easy access in providing vaccination sites for the people in their region during recovery conditions. M-RCov19 can be used by all parties, including the community, in preparing disaster management plans and assisting Regional Governments in developing strategies for implementing programs, policies and activities to reduce the risk of Covid-19.

## ACKNOWLEDGMENT

Researchers would like to thank the Padang Health Polytechnic for funding the research and the West Sumatra Provincial Health Service and BPBD as partners.

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