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### The Prevalance Overview of ARI Sufferers in the Mining Environment at Cinta Jaya Inc, Molawe District

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#### ABSTRACT

**Introduction:** Mining activities also cause traffic disturbances due to the back and forth of operational vehicles and transporters going and out of the special terminal area, causing a decrease in air quality and noise which can increase the prevalence of Ari based on data from molawe health center with a population of 5291,30 ARI patient, cases in 2019 and there were 37 cases in 2020 and 42 cases in 2021 this can affect the health status of the community in the mining environment of the molawe sub-district

**Method:** The method used in this study is descriptive research method. The descriptive method was chosen because the study carried out aims to describe the data naturally. The data used are secondary data and documents from the Health Office of Southeast Sulawesi Province, Limbo Health Center, Molawe District, 2019 - 2021. North Konawe Regency, Southeast Sulawesi Province.

**Result:** It was concluded that there was a relationship between age and gender with the incidence of ARI in infants. From 42 respondents, the results showed that most of the respondents were exposed to cigarette smoke, namely 34 respondents or 81.0% and the remaining only 8 respondents (19%) who had no exposure to cigarette smoke. Based on these data, it can be concluded that most children under five are exposed to cigarette smoke.

**Conclusion:** The factors that influence the increasing prevalence of ARI are residential density, smoking/behavior and mining activities that are very at risk for suffering from ARI disease

## Introduction

Pneumonia is an infection that causes inflammation of the air sacs in one or both lungs. In people with pneumonia, a collection of small air sacs at the end of the respiratory tract in the lungs (alveoli) will become inflamed and filled with fluid or pus. As a result, the patient experiences shortness of breath, coughing up phlegm, fever or chills. The population that is susceptible to pneumonia is children aged less than 5 years, elderly people over 65 years.<sup>[1]</sup>

According to the Indonesian Health Profile, pneumonia causes 15% of under-five deaths, which is around 922,000 children under five in 2015. From 2015-2018 confirmed cases of pneumonia in children under 5 years old increased by about 500,000 per year, reaching 505,331 patients with 425 patients dying. There are 3 (three) risk factors for the occurrence of ARI, namely environmental factors, individual child factors, and behavioral factors, environmental factors include air pollution in the house, physical condition of the house, and housing density, individual child factors include child's age, birth weight, status nutrition, vitamin A, and immunization status. Meanwhile, behavioral factors related to the prevention and control of ARI in infants and toddlers in this case is the practice of handling ARI in the family, whether carried out by mothers or other family members.<sup>[2]</sup>

Environmental factors can also be caused by air pollution in the house such as cigarette smoke, smoke from the kitchen due to cooking with firewood and the habit of using mosquito coils inside the house.<sup>[3]</sup>

Mining is the second oldest industry in the world after agriculture. Mining industry projects are expected to become poles of economic growth for the country and the surrounding area such as in Indonesia. Indonesia is a country rich in natural resources and as a country known as a country that has the third largest tropical forest in the world, with diverse ecosystems, so it can attract investors from within and outside the country, for example, North Konawe Regency, Molawe District.

Mining activities also cause traffic disturbances due to the back and forth of operational vehicles and transporters going in and out of the special terminal area, causing a decrease in air quality and noise which can increase the prevalence of ARI. Based on data from the

Molawe Health Center with a population of 5,291, 30 ARI patients, cases in 2019, and there were 37 cases in 2020 and 42 cases in 2021. this can affect the health status of the community in the mining environment of the Molawe sub-district.

## Method

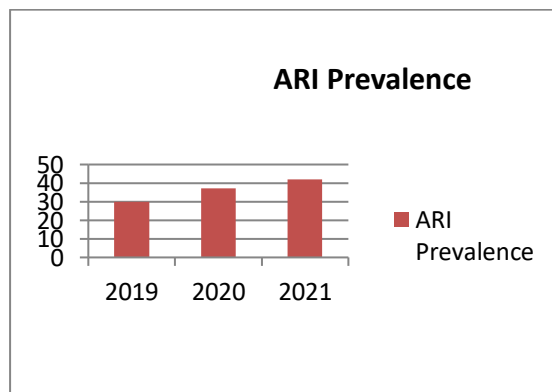
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## Result

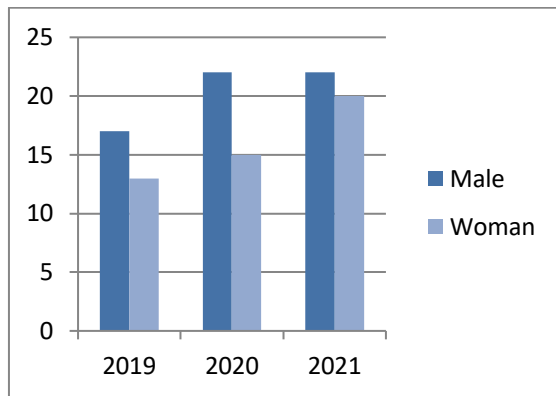
**Figure 1** based on research, it is known that the prevalence of ARI in the Molawe sub-district of the Lembo Public Health Center has increased every year from 2019-2021. In 2019, which was 30 cases, in 2020 it increased to 37 cases and in 2021, namely 42 cases, this Puskesmas was the area with the most ARI cases. in the district. North konawe.

**Figure 2** based on research on the number of ARI cases by gender, male is the most common case every year, namely in 2019 which is 17 cases, in 2020 it is 22 cases and in 2021 it is 22 cases.

**Figure 1. ARI Disease Prevalence in Molawe District in 2019-2020**



**Figure 2. Prevalance of ARI Sufferens by Gender in 2019-2021**



## Discussion

The results of the evaluation of the Molawe Health Center level program, North Konawe Regency specifically for ARI infectious diseases from 2019-2021 with the number of children under five in Molawe District 1501 as many as 30 cases increasing in 2020 with the number of toddlers from 554 to 37 cases and in 2021 an increase of 42 cases. male sex with the most ARI cases from 2019-2021 It was concluded that there was a relationship between age and gender with the incidence of ARI in infants <sup>[4]</sup>

## Occupancy Density

This study is the same as research from Ningrum (2015) that there is no relationship between residential density and the incidence of ARI in children under five. The number of people living in the house can increase the room temperature. However, in this study, there was no significant relationship between residential density and the incidence of ARI in infants. This means that the occupancy density of the toddler's bedroom has a significant relationship with the incidence of ARI in toddlers. The number of members who sleep in one bed room is easier for disease transmission to occur. <sup>[5]</sup>

## Smoking habit

Smoking Habits From 42 respondents, the results showed that most of the respondents were exposed to cigarette smoke, namely 34 respondents or 81.0% and the remaining only 8 respondents (19%) who had no exposure to cigarette smoke. Based on these data, it can be concluded that most children under five are

exposed to cigarette smoke. As for the place where family members smoked, from 42 respondents, it showed that most of the family members smoked inside the house as many as 34 families (87%), the rest of the family members who smoked outside the house as many as 5 families with a percentage of 13%. It can be concluded that most of the respondent's family smoked in the house. The study was conducted on 42 toddlers in the sub-district of Molawe, the working area of the Lembo Public Health Center. <sup>[6]</sup>

## Work

Work Southeast Sulawesi is one of the richest areas in Indonesia. Among them are rich in mining products in the form of nickel, gold, and other mineral mines. North Konawe is one of the areas in Southeast Sulawesi which has the largest nickel mine. Mining is an activity of extracting valuable and economically valuable mineral deposits from the earth's crust, below the earth's surface and below the water surface. Mining is very susceptible to disease, this happens because the environment is susceptible to triggering disease patterns, a disease arises. <sup>[7]</sup> because of triggers including the environment.

Conditions that are not good for the body are susceptible to causing disease, there are three elements that play a role in the history of disease, namely Agent, Environment, Host. Agents are all materials/conditions that cause health problems or disease in humans in society. (Dainur, 1995) According to research conducted by Abu BaqarSydiq, et al in 2016, the dominant type of disease suffered by nickel miners in Molawe District, North Konawe Regency is acute respiratory infection (ARI). <sup>[8]</sup>

## Conclusion

Based on data from the Lembo Public Health Center, Kec. Molawe in 2019 - 2021, the number of diseases that mostly suffer is ARI, where in 2019 there were 30 cases in 2020, namely 37 cases and in 2021 it increased to 2021 cases, based on the type The sex of most ARI sufferers is male, which increases every year from 2019-2021. The factors that influence the increasing prevalence of ARI are residential density, smoking habits/behavior and mining activities that are very at risk for suffering from ARI disease.

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