
3 MAJOR HEALTH ISSUES IN THE WORKING AREA OF THE GENUK COMMUNITY HEALTH CENTER IN SEMARANG CITY

Hafshah Nur Aulia¹, Nudia Nur Hikmah², Rikza Alfina Syaharani³, Alex Rifqi⁴, Septya Kumala Dewi⁵, Amalia Salsabila⁶, Mayda Anisa Putri⁷, Haikal⁸, Syifayudha Nuari⁹

¹Program Studi Kesehatan Masyarakat, Fakultas Kesehatan, Universitas Dian Nuswantoro, Semarang, Indonesia

*Corresponding Author : magangpkmgenuk@gmail.com

Received :

Accepted :

Available online by :

Abstract . changes in disease patterns indicate the occurrence of a triple burden of disease, where infectious and non-infectious diseases remain major problems in primary health care services. The Genuk Community Health Center in Semarang City recorded acute respiratory infections (ARI), pharyngitis, and hypertension as the three diseases with the highest number of cases. This study aims to describe the distribution of ARI, pharyngitis, and hypertension cases based on region and gender in the Genuk Community Health Center service area. This study was a descriptive study using secondary data obtained from routine disease records and reports at the Genuk Community Health Center during the period January–October 2025. Data were analyzed descriptively through frequency distribution and percentage calculations based on disease type, subdistrict, and gender. The results showed that ARI was the disease with the highest number of cases (1,285 cases), followed by pharyngitis (1,070 cases) and hypertension (944 cases). Genuksari Sub-district recorded the highest number of cases for all three diseases, while Terboyo Kulon recorded the lowest. Based on gender, all disease cases were dominated by males. The high number of cases in the Genuk Community Health Center working area, particularly in Genuksari, was influenced by environmental factors such as exposure to industrial pollution, as well as behavioral and lifestyle factors. These findings are consistent with previous studies indicating that environmental pollutants, smoking habits, outdoor activities, stress, and low rates of routine health checkups contribute to the incidence of respiratory diseases and hypertension. In conclusion, ARI, pharyngitis, and hypertension remain major health problems in the Genuk Community Health Center working area, with cases concentrated in high-risk areas and occurring more frequently among males, highlighting the need to strengthen promotive and preventive efforts focused on environmental control and healthy behavior improvement.

Keywords: *acute respiratory infection, pharyngitis, hypertension, primary health care*

INTRODUCTION

In recent decades, global and national disease patterns have shown significant changes. Non-communicable diseases (NCDs) are now the leading cause of death, driven by lifestyle changes, urbanization, and increased life expectancy(1) . Non-communicable diseases (NCDs) account for approximately 43 million deaths or 75% of all global deaths(2) . On the other hand, Communicable Diseases (CD) remain a significant threat, especially in low- and middle-income countries, including Indonesia, which still faces high rates of tuberculosis, respiratory tract infections, and other tropical diseases(3) .

Indonesia currently faces *a triple burden of disease*, namely the increase in Non-Communicable Diseases (NCDs), the persistently high incidence of communicable diseases that have not been optimally addressed, and the emergence of new communicable diseases(4) . National data from 2019 shows that the leading causes of death are dominated by stroke, ischemic heart disease, and diabetes mellitus, while tuberculosis and lower respiratory tract infections continue to contribute significantly. This situation illustrates that both non-communicable diseases (NCDs) and communicable diseases (CDs) still place a heavy burden on health services, particularly at primary health facilities such as community health centers (puskesmas)(5) .

According to the 2023 Central Java Health Profile, the number of people with hypertension among those aged over 15 years reached 8,554,672, or 38.2% of the total population in that age group(6) . In urban areas, non-communicable diseases such as hypertension and diabetes mellitus are common conditions encountered at community health centers and are often found as comorbidities with infectious diseases, ultimately exacerbating the burden on primary healthcare services(7) . Additionally, based on the 2024 Central Java Health Pocket Book, the prevalence of Acute Respiratory Infections (ARI) was recorded at 999,760 cases(8) . Acute pharyngitis, as one manifestation of ARI, was among the top ten outpatient diseases in 2024, with thousands of cases each year and becoming one of the main causes of outpatient visits(9) .

Community health centers play a strategic role as the frontline in public health services, both in curative and promotive and preventive efforts(10) . In fulfilling this role, community health centers require accurate information about the health situation in their service areas. This information is obtained through routine disease recording and reporting activities as part of health surveillance(11) . Surveillance data is crucial for identifying dominant disease patterns, determining health priorities, and developing health programs that meet community needs.

The Genuk Community Health Center handles various cases of infectious and non-infectious diseases that reflect the health conditions of the community in its working area. Based on disease recording and reporting data at the Genuk Community Health Center in 2025, acute respiratory infections (ARI), pharyngitis, and hypertension are the three types of diseases with the highest number of cases in the Genuk Community Health Center's working area. This situation indicates the simultaneous occurrence of infectious and non-infectious diseases, reflecting the phenomenon of *triple burden disease*, and has the potential to increase the burden on primary health care services.

Based on these conditions, this study aims to describe the distribution of ARI, pharyngitis, and hypertension cases by region and gender in the Genuk Community Health Center working area. This study is expected to provide information on the description of the three diseases as a basis for determining health priority issues and planning promotive, preventive, and curative programs at the primary health care level.

METHODS

This study is a descriptive study that aims to describe the three major diseases in the working area of the Genuk Community Health Center, Semarang City, during the period from January to October 2025. This study uses secondary data obtained from routine disease recording and reporting activities at the community health center. The data are aggregate data from patient clinical records that include disease diagnoses.

The selection of the period from January to October 2025 was based on the availability of disease data, which was the latest data and was complete, validated, and well documented in the routine recording and reporting system at the Genuk Community Health Center, while data for November–December was not yet fully available because it was still being recapitulated at the time the study was conducted.

The variables in this study consisted of the main variables, namely disease types, including hypertension, pharyngitis, and acute respiratory infections (ARI), as well as additional variables in the form of gender. These three diseases were selected because they are the diseases with the highest number of cases in the Genuk Community Health Center's working area.

Data analysis was performed descriptively by calculating the frequency distribution and percentage based on disease type and gender. The entire data processing and analysis process was performed using Microsoft Excel version 2019. The analysis results are presented in tables and bar charts to provide an overview of the distribution and patterns of the three major diseases in the Genuk Community Health Center working area.

RESULT

During the observation period from January to October 2025, cases of upper respiratory tract infections (URTI), pharyngitis, and hypertension were recorded at the Genuk Community Health Center. All data were obtained from outpatient visit reports diagnosed by health workers at the Genuk Community Health Center.

Table 1.1 Number of Cases of the Top Three Diseases in the Genuk Community Health Center Service Area

No.	Type of Disease	Number of Cases
1.	Upper Respiratory Tract Infection	1,285
2.	Pharyngitis	1,070

3. Hypertension	944
Total	3,299

Based on the data on the number of cases in the table, it can be seen that upper respiratory tract infections (URTI) are the disease with the highest number of cases in the Genuk Community Health Center working area, with 1,285 cases, while hypertension is the disease with the lowest number of cases of the three diseases in the Genuk Community Health Center working area, with 944 cases.

A. Distribution of case numbers by subdistrict

During the observation period from January to October 2025, cases of upper respiratory tract infections (URTI), pharyngitis, and hypertension were recorded at the Genuk Community Health Center. The following data shows the number of cases based on the distribution of the Genuk Community Health Center's working area.

Table 1.2 Data on the Distribution of Cases for the 3 Diseases by Village

No.	Subdistrict	Number of Cases		
		URTI	Pharyngitis	Hypertension
1	Genuksari	602	499	396
2	Banjardowo	296	357	252
3	Terboyo Kulon	5	36	7
4	Terboyo Wetan	30	6	24
5	Trimulyo	78	112	99
6	Muktiharjo Lor	186	1	108
7	Gebangsari	88	59	58
	Total	1,285	1,070	944

Based on the patients' residential areas, the cases of these diseases are spread across several villages within the Genuk Community Health Center's working area. The highest number of cases for these three diseases came from Genuksari Village, while the lowest number of cases for ARI came from Terboyo Kulon Village. The lowest number of cases for pharyngitis was found in Muktiharjo Lor Village, while the lowest number of cases for hypertension was found in Terboyo Kulon Village.

B. Distribution of Cases by Gender

The following is a presentation of disease distribution data by gender, showing cases of ISPA, Pharyngitis, and Hypertension in the Genuk Health Center's service area.

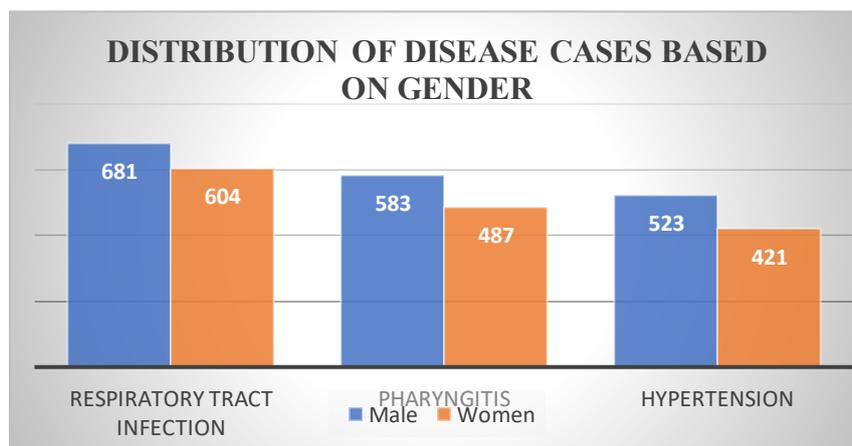


Figure 1.1 Distribution of 3 Disease Cases Based on Gender

DISCUSSION

This study aims to describe the distribution of cases of upper respiratory tract infection (URTI), pharyngitis, and hypertension based on region and gender in the Genuk Community Health Center working area

during the period January–October 2025. The results show that URTI is the disease with the highest number of cases, followed by pharyngitis and hypertension. Geographically, Genuksari Village had the highest number of cases for all three diseases, with a total population of 17,892(12) . This condition is inseparable from environmental factors, particularly the existence of an industrial area in Genuk District, which has around 144 medium and large-scale industries/factories, which have the potential to increase exposure to air pollution and the risk of respiratory health disorders and non-communicable diseases(13) . In addition, the results of the study also show that cases of ARI, pharyngitis, and hypertension are dominated by males. These findings indicate that in addition to environmental and regional factors, behavioral factors and differences in lifestyle between men and women also play a role in the high incidence of disease in the Genuk Community Health Center working area.

These research findings are in line with Rullah et al. (2023), which shows that exposure to dust and environmental pollutants, smoking habits, and low use of personal protective equipment (PPE) are significantly associated with the incidence of ARI(14) . This condition is relevant to the Genuk area as an industrial area, where environmental exposure and risky behaviors are more commonly found in men, who are more prone to respiratory diseases such as ARI. Meanwhile, Tombeng and Porajow (2022) emphasize that pharyngitis is closely related to respiratory tract infections, exposure to cigarette smoke, and lifestyle(15) . Furthermore, in line with the research by Putri et al. (2023), which found a significant relationship between nutritional status, physical activity, coffee consumption, and stress with the risk of hypertension, the differences in the magnitude of risk found may be influenced by variations in respondent characteristics, methods, and the context of the research area, thus strengthening the evidence that lifestyle factors play an important role in the incidence of hypertension(16) .

The distribution of ISPA cases in the Genuk Community Health Center working area shows that Genuksari Village has the highest number of cases (602 cases), influenced by differences in population density, environmental conditions, community mobility, and access to and utilization of health services. The high number of cases in Genuksari is thought to be related to the large population and high level of community activity, coupled with environmental factors such as air pollution, inadequate home ventilation, and smoking indoors(17) .

The results of the study show that the number of pharyngitis cases in the Genuk Community Health Center working area is relatively high, with a total of 1,070 cases, of which Genuksari Village has the highest number of cases (499 cases). The high number of cases in Genuksari Village is thought to be related to risk factors similar to those for ARI, such as unhealthy environmental conditions, exposure to cigarette smoke and dust, and weather changes that can trigger irritation and upper respiratory tract infections(18) . Additionally, based on gender, pharyngitis cases are dominated by males, which may be influenced by smoking habits, higher exposure to air pollution due to outdoor work activities, and insufficient use of personal protective equipment such as masks in dusty environments(19) .

In addition to infectious diseases, hypertension is a significant health problem in the Genuk Community Health Center working area, with a total of 944 cases, where Genuksari Village recorded the highest number of cases (396 cases) and Banjardowo (252 cases). The high incidence of hypertension in several villages is influenced by unhealthy lifestyle factors such as a diet high in salt and fat, lack of physical activity, and stress, in addition to age-related factors that increase the risk among adults and the elderly(20) . Based on gender, hypertension is more prevalent in men, which is related to smoking, alcohol consumption, an unbalanced diet, work stress, and a lack of regular health checkups, although older women are also at high risk of developing hypertension after menopause due to hormonal changes(21) .

The high number of cases of ARI, pharyngitis, and hypertension in the Genuk Community Health Center working area indicates the need to strengthen promotional and preventive efforts through increased education on clean and healthy living behaviors, control of environmental factors, and prevention of exposure to cigarette smoke and air pollution for respiratory diseases, as well as optimization of early detection, education on healthy lifestyles, and routine blood pressure monitoring, especially among high-risk age groups. Through integrated and sustained efforts, it is hoped that the incidence of both infectious and non-infectious diseases can be reduced(22) .

This discussion is based on secondary data from outpatient visit reports. Therefore, the data only reflects cases that were recorded at the Genuk Community Health Center, so there may still be undetected cases in the community. Additionally, other information such as age, occupation, and specific risk factors has not been analyzed in depth, which could be an opportunity for further research..

15. Jeremia A. Tombeng, Zwingly CJG Porajow. Diagnostik holistik pasien faringitis dengan hipertensi di Puskesmas Bahu. *J Kedokt Komunitas dan Trop.* 2022;10(1):383–6.
16. Putri LM, Mamesah MM, Sulistyana CS, Prodi S, Stikes ARS, Husada A, et al. Faktor Risiko Hipertensi Pada Masyarakat Usia Dewasa & Lansia Di Tambaksari Surabaya Risk Factors that Affecting Hypertension Incident Among Adult & Elderly in Tambaksari , Surabaya . *J Heal Manag Res.* 2023;2(1):1–6.
17. Nabila DS, Siregar SA, Syafitri S, Nabilla S, Nuzlan DR. Faktor-Faktor yang Mempengaruhi Kejadian ISPA di Lingkungan II , Kelurahan Nelayan Indah , Kecamatan Medan Labuhan. 2025;2(2):54–63.
18. Yusmanita. Mengenal lebih dekat tentang penyakit ISPA [Internet]. 2025. Available from: <https://dinkes.acehbaratdayakab.go.id/berita/kategori/kesehatan/mengenal-lebih-dekat-tentang-penyakit-ispa>
19. Untari MK, Fatimah S, Putri HD, Rahmawati AR. Kajian Penggunaan Obat Yang Rasional Pada Faringitis Akut di Puskesmas X Karanganyar. 2024;4(1):133–44.
20. Nisa F, Nuryanti L, Dedu BSS. HUBUNGAN GAYA HIDUP DENGAN RISIKO HIPERTENSI PADA USIA DEWASA. 2025; Available from: <https://dinkes.acehbaratdayakab.go.id/berita/kategori/kesehatan/mengenal-lebih-dekat-tentang-penyakit-ispa>
21. Angelita H, Karolus H, Oktarina S. Hubungan Gaya Hidup Dengan Tingkat Kejadian Hipertensi Di Puskesmas Kecamatan Johar Baru Jakarta. 2025;6(1):76–85.
22. Syamsu RF, Saputra A, Lausiri S. Analisis Strategi Pencegahan terhadap Sepuluh Penyakit Terbanyak di Puskesmas Sudiang Raya Tahun 2024. 2025;8(3):525–34.