Overview Of The Results Of Free Health Checks For The Community At The Plamongan Sari Community Health Center Based On The Sehat Indonesiaku Dashboard

Ikha Hygi Savitri, Mamat Supriyono, Putri Damayanti, Eka Nur Ayu, Husni Daffa, Khofifatun Nisa, Aziztya Safrily, Bayu Yoni Setyo Nugroho

[1] Head of the Plamongan Sari Community Health Center

[2] Epidemiologist at the Plamongan Sari Community Health Center

[3] Public Health Study Program, Faculty of Health, Dian Nuswantoro University

[4] Public Health Study Program, Faculty of Health, Dian Nuswantoro University

[5] Public Health Study Program, Faculty of Health, Dian Nuswantoro University

[6] Public Health Study Program, Faculty of Health, Dian Nuswantoro University

[7] Public Health Study Program, Faculty of Health, Dian Nuswantoro University

[8] Lecturer, Public Health Study Program, Faculty of Health, Dian Nuswantoro University

ABSTRAK

Penyakit tidak menular (PTM) masih menjadi masalah kesehatan utama di Indonesia. Program Cek Kesehatan Gratis (CKG) berperan penting dalam mendeteksi dini faktor risiko PTM di tingkat pelayanan kesehatan primer. Penelitian ini bertujuan untuk menggambarkan hasil pemeriksaan kesehatan dan faktor risiko PTM pada peserta Program Cek Kesehatan Gratis. Penelitian deskriptif dengan desain potong lintang menggunakan data sekunder Program CKG. Variabel yang dianalisis meliputi tekanan darah, indeks massa tubuh (IMT), lingkar perut, aktivitas fisik, perilaku merokok, kadar gula darah, kesehatan gigi dan mulut, profil lipid, EKG, dan fungsi ginjal. Data disajikan dalam bentuk persentase. Hanya 48,35% peserta usia ≥18 tahun memiliki tekanan darah normal. Overweight dan obesitas masih tinggi, serta 42,48% peserta mengalami obesitas sentral. Sebagian besar peserta (81,14%) memiliki aktivitas fisik kurang. Prediabetes dan hiperglikemia masih ditemukan, disertai masalah kesehatan gigi dan mulut. Skrining lanjutan menunjukkan tingginya dislipidemia dan temuan EKG abnormal. Program CKG menunjukkan tingginya faktor risiko PTM di masyarakat. Diperlukan penguatan upaya promotif dan preventif serta skrining kesehatan rutin di fasilitas pelayanan kesehatan primer.

Kata kunci: Cek Kesehatan Gratis, Penyakit Tidak Menular, Faktor Risiko, Skrining.

ABSTRACT

Non-communicable diseases (NCDs) remain a major public health problem in Indonesia. The Free Health Check Program (CKG) supports early detection of NCD risk factors at the primary health care level. This study aimed to describe health examination results and major NCD risk factors among participants of the Free Health Check Program. A descriptive cross-sectional study was conducted using secondary data from the CKG program. Variables included blood pressure, body mass index (BMI), waist circumference, physical activity, smoking behavior, blood glucose, oral health status, lipid profile, ECG, and kidney function. Data were analyzed descriptively and presented as percentages. Only 48.35% of participants aged ≥18 years had normal blood pressure. Overweight, obesity, and central obesity were common, and most participants had insufficient physical activity. Prediabetes, hyperglycemia, oral health problems, dyslipidemia, and abnormal ECG findings were also observed. The Free Health Check Program revealed a high burden of NCD risk factors. Strengthening promotive and preventive efforts and routine screening at primary health care facilities is essential.

Keywords: Free Health Check Program, Non-Communicable Diseases, Risk Factors, Screening.

PREFACE

Community Health Centers (Puskesmas) are primary health care facilities that play a strategic role in the provision of primary health care based on four service clusters, which include Cluster 1 (Management), Cluster 2 (Maternal and Child Health Services), Cluster 3 (Elderly Adults), and Cluster 4 (Communicable Disease Control), supported by integrated and continuous cross-cluster services in accordance with the latest policies of the Ministry of Health of the Republic of Indonesia [1]. As the frontline of the national health care system, community health centers focus on a promotive and preventive approach through strengthening health screening, early detection of risk factors, and life cycle-based interventions to increase public awareness, willingness, and ability to maintain and improve their health to the optimal level [2]. This role is in line with Law No. 17 of 2023 on Health, which emphasizes that primary health care services should focus on disease prevention and improving the quality of life of the community [3].

The Plamongan Sari Community Health Center (UPTD Puskesmas Plamongan Sari) is located in Pedurungan District, Semarang City. Initially, this facility had the status of Plamongan Sari Auxiliary Community Health Center until January 2021, before being upgraded to a main community health center in January 2023. The service area of the Plamongan Sari Community Health Center covers Plamongan Sari Village, Pedurungan Kidul Village, and Penggaron Kidul Village, with a total population of approximately 37,674 people [4]. With its large coverage area and population, as well as a heterogeneous community, the Plamongan Sari Community Health Center plays a very important role in providing equitable and sustainable primary health care services. The implementation of cluster-based services enables the Community Health Center to optimize its promotional and preventive efforts, particularly in controlling non-communicable diseases, improving maternal and child health, and early detection of mental health problems. Additionally, cross-cluster service support is key to ensuring service continuity, especially for vulnerable groups and communities with complex health risk factors.

One form of promotional and preventive efforts carried out at the Community Health Center is the Free Health Check Program (CKG). This program is a community health screening activity that is conducted free of charge, with the main objective of early detection of individual health conditions and disease risk factors, particularly non-communicable diseases (NCDs) such as hypertension, diabetes mellitus, and obesity [5]. Health screening at primary health care facilities has been proven effective in identifying risk factors for NCDs before clinical symptoms arise, enabling more appropriate and efficient early intervention [6]. Melalui pelaksanaan CKG, masyarakat diharapkan memperoleh informasi mengenai status kesehatannya sejak dini guna mencegah terjadinya komplikasi penyakit di kemudian hari [7].

Non-communicable diseases remain the leading cause of illness and death in Indonesia [8]. The increase in the prevalence of NCDs is closely related to changes in people's lifestyles, including an unbalanced diet, low levels of physical activity, and an increase in the prevalence of obesity [9]. The World Health Organization (WHO) states that most NCDs can be prevented through the control of modifiable risk factors and early detection through health screening at the primary health care level [10]. Therefore, the

implementation of the CKG Program at the Community Health Center is one of the important strategies in reducing the burden of NCDs through a continuous promotive and preventive approach.

Based on data from the Indonesiaku Health Portal as of December 20, 2025, a total of 13,439 people have registered as participants in the Free Health Check Program in the working area of the Plamongan Sari Community Health Center UPTD. The high level of community participation shows the significant potential role of community health centers in supporting early detection and disease prevention efforts, particularly NCDs, through promotive and preventive primary health care services [11].

RESEARCH METHOD

This study is a quantitative descriptive study that aims to describe the results of the implementation of the Free Health Check (CKG) program in the community in the working area of the Plamongan Sari Community Health Center (UPTD Puskesmas Plamongan Sari). The research design used is a documentation study utilizing secondary data sourced from the Free Health Check (CKG) Dashboard on the Sehat Indonesiaku platform [12], [13]. The research data was collected from January 1 to December 20, 2025. The research location was at the Plamongan Sari Community Health Center, Pedurungan District, Semarang City. The research population included all CKG program participants registered in the health center's working area, with the unit of analysis being aggregate data from health examinations, not individuals directly [5], [14].

The variables analyzed included blood pressure, body mass index, waist circumference, physical activity, smoking behavior, blood sugar levels, dental and oral health, and the results of further screening for non-communicable diseases such as lipid profiles, ECG examinations, and kidney function. Data collection was carried out through secondary data extraction from the Sehat Indonesiaku Dashboard in accordance with the technical guidelines for implementing the CKG program [13], [15]. Data analysis was performed descriptively, presenting frequency distributions and percentages for each research variable [16]. The results of the analysis are presented in tables and brief descriptions. This study uses aggregate data without respondent identities and does not involve direct contact with research subjects, so it does not require ethical clearance [5].

RESULTS AND DISCUSSION

Tabel 1 Examination Results

Variable	Kategories	Total (Person)	Percentage (%)
Blood Pressure (taken from ages 18 and above)	**Normal**	2.897	48,35
	Prehipertensi	1.067	17,80
	Hipertensi	2.030	33,86
	Total	**5.994**	**100,00**
BMI (taken from the age range of 18 years and above)	**Thin**	426	7,07
	Normal	3.253	53,98
	Overweight	787	13,06
	Obesitas	1.560	25,89
	Total	**6.026**	**100,00**

Variable	Kategories	Total (Person)	Percentage (%)
Physical Activity (taken from ages 18 and above)	**Sufficient**	891	18,86
	Insufficien	3.833	81,14
	Total	**4.724**	**100,00**
Smoking Behavior (taken from ages 17 and above)	**Not Smoking**	5.538	92,84
	Smoking	427	7,16
	Total	**5.965**	**100,00**
Blood Sugar	**Normal**	4.010	76,86
	Prediabetes	783	14,11
	Hiperglikemia	425	8,15
	Hipoglikemia	46	0,88
	Total	**5.264**	**100,00**
Dental Caries taken from ages 18 and above	**Healthy Teeth**	3.682	64,72
	Cavity	2.007	35,28
	Total	**5.689**	**100,00**
Stroke Risk (Lipid Profile)	**Normal**	338	32,41
	Dislipidemia	705	67,59
	Total	**1.043**	**100,00**
Heart Risk (EKG)	**Normal**	114	77,03
	Abnormal	34	22,97
	Total	**148**	**100,00**
Kidney Function	**Normal**	0	0,00
	Abnormal	4	100,00
	Total	**4**	**100,00**

Note: The number of respondents differs for each variable due to differences in the target age groups and not all participants underwent all types of examinations in the free health check program..

Based on Table 1, the distribution of examination results of participants in the Free Health Check Program shows that there is still a significant proportion of people with risk factors for non-communicable diseases (NCDs). These risk factors are evident in cardiovascular, metabolic, health behavior, and dental and oral health indicators. [17]. This situation illustrates that the burden of NCDs in the community remains high and requires serious attention through the strengthening of promotional and preventive efforts, as well as the implementation of continuous early detection at the primary health care level [12], [13].

A. Blood Pressure

The results showed that among respondents aged 18 years and above, the proportion of normal blood pressure was 48.35%, prehypertension was 17.80%, and hypertension reached 33.86%. Clinically, blood pressure is categorized as normal if the systolic pressure is <120 mmHg and the diastolic pressure is <80 mmHg, while hypertension is defined as systolic pressure ≥140 mmHg and/or diastolic pressure ≥90 mmHg.

The prevalence of hypertension, which affects one-third of the adult population, indicates a serious public health problem. The high prevalence of hypertension did not occur suddenly, but is the result of long-term exposure to risk factors. Behavioral factors such as excessive salt consumption, high saturated fat intake, lack of physical activity, and smoking play an important role in increasing blood pressure through mechanisms of increased vascular resistance and activation of the sympathetic nervous system [18]. The prevalence of hypertension, which affects one-third of the adult population, indicates a serious public health problem. The high prevalence of hypertension did not occur suddenly, but is the result of long-term exposure to risk factors. Behavioral factors such as excessive salt consumption, high saturated

fat intake, lack of physical activity, and smoking play an important role in increasing blood pressure through mechanisms of increased vascular resistance and activation of the sympathetic nervous system [19].

These findings are consistent with previous studies stating that a sedentary lifestyle and unhealthy diet are the main determinants of hypertension in the adult population. Uncontrolled hypertension is known to be a major risk factor for coronary heart disease, stroke, and chronic kidney failure, thus contributing significantly to the increased burden of noncommunicable diseases and premature death [20] [14] [15].

B. Body Mass Index (BMI)

Based on BMI measurements of respondents aged 18 years and above, the proportion of normal BMI was 53.98%, overweight 13.06%, and obese 25.89%. By standard, BMI is categorized as normal in the range of 18.5–24.9 kg/m², overweight at 25.0–29.9 kg/m², and obese at ≥30 kg/m².

The high prevalence of obesity indicates a chronic energy imbalance, where energy intake exceeds energy expenditure. A diet high in calories, fat, and simple sugars, which is not balanced by sufficient physical activity, is a major factor in the increase in obesity. Urbanization and lifestyle changes also encourage sedentary behavior, which accelerates the accumulation of body fat. Obesity is strongly associated with various metabolic diseases, including hypertension and type 2 diabetes mellitus. Excess fat tissue acts as an endocrine organ that produces proinflammatory cytokines, triggering insulin resistance and vascular endothelial dysfunction [21].

These results are consistent with previous studies stating that obesity is a major risk factor for hypertension, type 2 diabetes mellitus, and cardiovascular disease. The increase in obesity prevalence reflects a nutritional transition that has not been balanced by healthy lifestyle behaviors [22], [23].

C. Physical Activity

Most respondents aged 18 years and above (81.14%) had low levels of physical activity, while only 18.86% met the criteria for adequate physical activity. Physical activity is considered adequate if an individual performs at least 150 minutes of moderate-intensity activity per week. Low physical activity reflects the increasingly common sedentary lifestyle in modern society. Work patterns dominated by sedentary activities, the use of motor vehicles, and a lack of regular exercise contribute to low energy expenditure.

Lack of physical activity has a direct impact on weight gain, insulin resistance, and increased blood pressure. In addition, low physical activity is also associated with an unhealthy lipid profile, thereby increasing the risk of cardiovascular disease. Previous studies have shown that lack of physical activity plays a significant role in the increase in obesity, hypertension, and diabetes mellitus [25]. The WHO recommends at least 150 minutes of moderate physical activity per week to reduce the risk of NCDs [26].

D. Blood Sugar

Blood sugar test results for respondents aged 2 years and above showed that 14.11% were in a prediabetic state and 8.15% had hyperglycemia. Fasting blood sugar levels are categorized as normal if

they are <100 mg/dL, while prediabetes is in the range of 100–125 mg/dL. The high proportion of prediabetes indicates that there is a population group in the transition phase to type 2 diabetes mellitus.

This condition is influenced by obesity, especially central obesity, as well as low physical activity, which causes insulin resistance. Prediabetes is a critical phase because progression to diabetes can still be prevented through lifestyle interventions, such as weight loss, increased physical activity, and improved diet. Previous studies confirm that prediabetes is a critical phase whose progression can still be prevented through lifestyle interventions, making blood sugar screening crucial in preventing diabetes and its complications [28], [29].

E. Stroke Risk Based on Lipid Profile

A total of 67.59% of respondents had dyslipidemia, indicating a high risk of atherosclerosis and stroke. Dyslipidemia is characterized by increased total cholesterol, LDL, triglycerides, and decreased HDL. Dyslipidemia is closely related to obesity, a diet high in saturated fat, and low physical activity. This condition causes the formation of atherosclerotic plaque in the blood vessels, which ultimately increases the risk of stroke and coronary heart disease.

These results are consistent with previous studies stating that lipid profile disorders, particularly increased levels of total cholesterol, LDL, and triglycerides and decreased HDL, are one of the main risk factors for cardiovascular disease in the adult population [30].

F. Heart Risk Based on EKG Examination

The ECG examination showed that 22.97% of respondents had abnormal results. Abnormal EKG results may reflect cardiac arrhythmia, ventricular hypertrophy, or signs of myocardial ischemia. These conditions are often associated with chronic hypertension, dyslipidemia, and other metabolic disorders. Therefore, EKG screening is important in the early detection of heart disease, especially in individuals with risk factors for non-communicable diseases.

Previous studies have shown that electrocardiography (ECG) screening is effective in detecting heart disorders early, such as arrhythmias and signs of myocardial ischemia, especially in individuals with risk factors for noncommunicable diseases such as hypertension, diabetes mellitus, and dyslipidemia [30].

G. Kidney Function

All respondents who underwent renal function tests showed abnormal results (100%). This indicates that renal function tests were performed on respondents with specific clinical indications, not the general population. Renal dysfunction is generally a long-term complication of uncontrolled hypertension and diabetes mellitus. High blood pressure and chronic hyperglycemia cause progressive damage to the renal glomeruli.

These findings are consistent with previous studies stating that hypertension and diabetes mellitus are the main causes of chronic kidney disease through progressive damage to blood vessels and kidney glomeruli, making control of risk factors key to preventing chronic kidney disease [31].

CONCLUSION AND ADVICE

CONCLUSION

Based on the results of data processing from the implementation of the Free Health Check Program (CKG) among the community in the working area of the Plamongan Sari Community Health Center UPTD, sourced from the Sehat Indonesiaku Dashboard, it can be concluded that the health condition of the community is still dominated by high risk factors for non-communicable diseases. This is reflected in the large proportion of the community with blood pressure outside the normal range, as indicated by the high prevalence of prehypertension and hypertension in the ≥18 age group [31], [32]. In addition, malnutrition remains relatively prominent, based on both body mass index and waist circumference measurements, indicating high rates of obesity and central obesity in the community.

From a health behavior perspective, most participants had inadequate levels of physical activity, potentially increasing their risk of cardiovascular and metabolic disorders. Although the prevalence of smoking was low, metabolic disorders such as prediabetes, hyperglycemia, and dyslipidemia were still found in a significant proportion of participants [33], [34]. Further screening results also indicate potential health complications, including heart disorders and decreased kidney function, particularly in certain age groups and groups with specific risk factors.

In addition, dental and oral health issues remain a major concern, as evidenced by the high incidence of dental caries, tooth loss, and loose teeth among adult participants [35]. Overall, these findings indicate that the Free Health Check Program plays a strategic role in early detection of public health conditions and in strengthening promotional and preventive efforts at the primary health care level [36].

ADVICE

1. For Community Healt Center

   The Plamongan Sari Community Health Center is advised to continue strengthening its promotional and preventive efforts, particularly through improving health education related to blood pressure control, implementing a balanced diet, increasing physical activity, and preventing obesity and central obesity. Additionally, more optimal follow-up is needed for participants with abnormal screening results through continuous health counseling, strengthening the appropriate referral system, and regular health condition monitoring.

2. For the Community

The public is expected to actively utilize the Free Health Check Program on an ongoing basis and adopt clean and healthy lifestyles, including increasing physical activity, maintaining a healthy and balanced diet, controlling weight, and undergoing regular health checkups to prevent complications from non-communicable diseases.

BIBLIOGRAPHY

[1] Kemenkes RI, *Pedoman etik penelitian kesehatan*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2017.

[2] Kemenkes RI, *Profil kesehatan Indonesia tahun 2019*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2020.

[3] Republik Indonesia, *Undang-Undang nomor 17 tahun 2023 tentang kesehatan*. Jakarta: Sekretariat Negara, 2023.

[4] Dinkes Kota Semarang, *Profil kesehatan Kota Semarang tahun 2019*. Semarang: Dinas Kesehatan Kota Semarang, 2020.

[5] Kemenkes RI, *Petunjuk teknis cek kesehatan gratis*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2019.

[6] E. Rahajeng dan S. Tuminah, "Prevalensi hipertensi dan determinannya di Indonesia," *Bul. Penelit. Kesehat.*, vol. 37, no. 4, hal. 154–162, 2009.

[7] S. Notoatmodjo, *Promosi kesehatan dan perilaku kesehatan*. Jakarta: Rineka Cipta, 2012.

[8] Kemenkes RI, *Petunjuk teknis pengukuran faktor risiko penyakit tidak menular*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2021.

[9] Kemenkes RI, *Laporan Nasional Riskesdas 2018*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2018.

[10] WHO, *Global status report on noncommunicable diseases 2014*. Geneva: World Health Organization, 2014.

[11] Kemenkes RI, *Riset kesehatan dasar (Riskesdas) 2018*. Jakarta: Badan Penelitian dan Pengembangan Kesehatan, 2018.

[12] S. Notoatmodjo, *Metodologi penelitian kesehatan*. Jakarta: Rineka Cipta, 2018.

[13] Kemenkes RI, *Pedoman pencegahan dan pengendalian penyakit tidak menular*. Jakarta: Direktorat Jenderal Pencegahan dan Pengendalian Penyakit, 2019.

[14] Dinkes Provinsi Jawa Tengah, *Profil kesehatan Provinsi Jawa Tengah tahun 2019*. Semarang: Dinas Kesehatan Provinsi Jawa Tengah, 2019.

[15] Kemenkes RI, *Petunjuk teknis pengukuran faktor risiko penyakit tidak menular di fasilitas pelayanan kesehatan tingkat pertama*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2017.

[16] Sugiyono, *Metode penelitian kuantitatif, kualitatif, dan R&D*. Bandung: Alfabeta, 2022.

[17] Perhimpunan Dokter Spesialis Kardiovaskular Indonesia, *Pedoman tatalaksana hipertensi pada penyakit kardiovaskular*. Jakarta: PERKI, 2021.

[18] M. Z. Ardiansyah dan E. Widowati, "Hubungan kebisingan dan karakteristik individu dengan kejadian hipertensi pada pekerja rigid packaging," *J. Public Heal. Res. Dev.*, vol. 8, no. 1, hal. 141–151, Jun 2024, doi: 10.15294/higeia.v8i1.75362.

[19] WHO, *WHO global report on hypertension: The race against a silent killer*. Geneva: World Health Organization, 2023.

[20] E. B. Hamzah, Rusnoto, dan F. Kartikasari, "Hubungan pola tidur, pola makan, dan aktivitas fisik dengan kejadian hipertensi di Wilayah Puskesmas Ngembal Kulon Kudus," *J. Penelit. Sains dan Kesehat. Avicenna*, vol. 4, no. 3, hal. 222–232, 2025.

[21] Masyitoh dan I. Budiono, "Faktor yang berhubungan dengan kejadian gizi lebih dan obesitas pada remaja," *Indones. J. Public Heal. Nutr.*, vol. 3, no. 1, hal. 59–68, Mar 2023, doi: 10.15294/ijphn.v3i1.57360.
[22] WHO, *Obesity and overweight fact sheet*. Geneva: World Health Organization, 2022.
[23] Kemenkes RI, *Pedoman pencegahan dan penanggulangan obesitas*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2020.
[24] WHO, *WHO guidelines on physical activity and sedentary behaviour*. Geneva: World Health Organization, 2020.
[25] American Diabetes Association, "Standards of medical care in diabetes," *Diabetes Care*, vol. 46, no. Suppl 1, hal. S1--S291, 2023.
[26] Kemenkes RI, *Profil kesehatan Indonesia*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2023.
[27] WHO, *Promoting health in the SDGs*. Geneva: World Health Organization, 2017.
[28] Kemenkes RI, *Pedoman pencegahan dan pengendalian diabetes melitus*. Jakarta: Kementerian Kesehatan Republik Indonesia, 2020.
[29] M. A. Putri, E. Herijulianti, dan N. Nurjannah, "Hubungan perilaku pemeliharaan kesehatan gigi dan mulut dengan status kesehatan gigi dan mulut," *J. Kedokt. Gigi Indones.*, vol. 20, no. 3, hal. 123–130, 2016.
[30] M. D. Gultom, "Faktor risiko penyakit ginjal kronik pada masyarakat dewasa," *J. Epidemiol. Kesehat. Komunitas*, vol. 8, no. 1, hal. 1–8, 2020.
[31] P. E. Petersen, "The world oral health report 2003: Continuous improvement of oral health in the 21st century," *Community Dent. Oral Epidemiol.*, vol. 31, no. Suppl 1, hal. 3–24, 2003.
[32] WHO, *Global status report on noncommunicable diseases*. Geneva: World Health Organization, 2014.
[33] Kemenkes RI, "Riset kesehatan dasar (Riskesdas) 2018," 2018, *Jakarta*.
[34] WHO, *WHO report on the global tobacco epidemic*. Geneva: World Health Organization, 2021.
[35] R. Ma'rufi dan L. Rosita, "Hubungan dislipidemia dengan kejadian penyakit jantung koroner," *J. Kedokt. dan Kesehat. Indones.*, vol. 6, no. 1, hal. 47–53, 2015.
[36] M. A. Putri, E. Herijulianti, dan N. Nurjannah, "Ilmu pencegahan penyakit jaringan keras dan jaringan pendukung gigi," *J. Kedokt. Gigi Indones.*, vol. 20, no. 3, hal. 123–130, 2016.