

Real Action of KKN Impacts: Health Services and Education for Residents of Sarimukti

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Abstract

Community Service (PKM) in the edition of real work lectures (KKN) with real impact needs to be developed through a collaborative model, carried out by UNIGA, the Bakrie Amanah Foundation, and Group 31 KKN 2026 with the theme "Community Development". This activity aims to improve public health and understanding of the importance of regular health check-ups. PKM activities were held in Sarimukti Village. The PKM method consists of the preparation, implementation and health survey stages. The health examination was carried out by a medical team consisting of 2 doctors, 2 nurses, and 2 pharmacists, as many as 107 elderly people took part in health checks. The results of the health survey show that as many as 86.2% of residents already have BPJS Kesehatan. The results of the health check showed that 50 residents had normal blood pressure, 105 residents had Normal SpO₂. Through this collaborative activity, it can have a positive impact on the realization of healthy.

Keywords: General Check Up, Health Education, Health Promotion, KKN, Sarimukti.

1. INTRODUCTION

Public health today is in dire need of deep attention. The economic and health levels have a very close mutual relationship. A good economy makes it easier to access quality services and nutrition, on the other hand, a healthy body increases a person's work productivity and income (Sihombing et al. 2022). The relationship between Indonesia's economic condition and the health level of citizens in 2026 is reciprocal. Stable economic growth in the range of 5.6% and maintained inflation control boosted optimism and people's purchasing power for health services, while the health budget allocation from the Indonesian Ministry of Finance which reached Rp244 trillion also strengthened basic medical facilities for citizens. However, not all groups of people can enjoy health facilities.

In some areas, the health of the Indonesian public is considered not good due to dietary habits such as eating a lot of sweet, fatty foods and high levels of salt and purines. Health problems that last for a long time or get worse are called chronic diseases (Bestari, B. K., & Wati 2016). Chronic diseases are often only experienced by the elderly, but these diseases increasingly affect productive young age groups, such as workers.

According to the 2023 Indonesian Health Survey (SKI) by the Ministry of Health, the prevalence of Diabetes Mellitus based on doctor's diagnosis rose to 1.7% (all age groups) and 2.2% (age ≥15 years). Meanwhile, data from the International Diabetes Federation (IDF) estimates that the number of people with diabetes in Indonesia will reach

20.4 million people (Ministry of Health of the Republic of Indonesia., 2024). The health dimension in Garut Regency in 2024–2025 is measured through the Life Expectancy (UHH) indicator in the Human Development Index (HDI). Based on data from the Central Statistics Agency (BPS), the life expectancy at birth in Garut Regency was recorded at 70.32 years in 2024 and increased to 70.67 years in 2025 (BPS 2025). Based on data from Garut Satu Data, the indicators of service and handling of hypertension patients in Garut Regency in 2025 recorded a target target of 80,870 people with hypertension, all of whom were successfully served 100% (Garut Health Office 2025). Hypertension can be diagnosed if systolic blood pressure is ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg, a poorly treated hypertensive disease can lead to heart attack and heart failure, stroke, and kidney disorders.

Sarimukti Village is one of the villages located in Pasirwangi District, Garut Regency, West Java Province. This village is located in a strategic area due to its proximity to tourist attractions. In Sarimukti village, the majority of residents work as farmers. Although work as a farmer is very minimal to contract chronic diseases, an unhealthy lifestyle can trigger it. In this village, there are only health facilities in the form of village health centers (PUSKESDES) which are only open on Fridays from 8-11 am. Based on the monitoring of the KKN team group 31 of Garut University, some residents do not periodically check their health. Based on the above problems, the purpose of providing to the community the 2026 edition of KKN aims to form a maintained public health, it is necessary to monitor several diseases that are common in Indonesia, especially in Sarimukti Village, so that appropriate clinical actions can be carried out and increase the level of awareness of individual health. Especially in Sarimukti village, many people feel that they do not know about their health conditions. In addition, diseases such as Diabetes, Hypertension, Hyperuricemia, and Hyperlipidemia are the causes of several other diseases that are likely to arise if not treated as soon as possible, some of these diseases can develop into heart disorders or strokes which are the highest cause of death in the world. Therefore, it is important to check blood glucose levels, blood pressure, uric acid and cholesterol to be a preventive measure and monitor several other diseases that are likely to arise in the future. This activity is a collaboration between Group 31 KKN 2026, and LAZNAZ Bakrie Amanah. The target of this activity is the residents of Sarimukti Village who are categorized as the elderly and the poor. The following is the location of PKM as seen in figure 1.



Figure 1. Location of Sarimukti Village

2. RESEARCH METHODOLOGY

The 2026 KKN edition PKM activity was carried out in Sarimukti Village, Pasirwangi District, Garut Regency on August 10, 2026 coinciding with Monday at the Village Health Center. The Group 31 KKN Team, through a community service program, held health check-up activities in collaboration with the Bakrie Amanah Foundation.

The service method is carried out in two stages, namely the preparation stage and the implementation stage (Kokom A., 2026). which will be explained in detail below. As shown in figure 2.

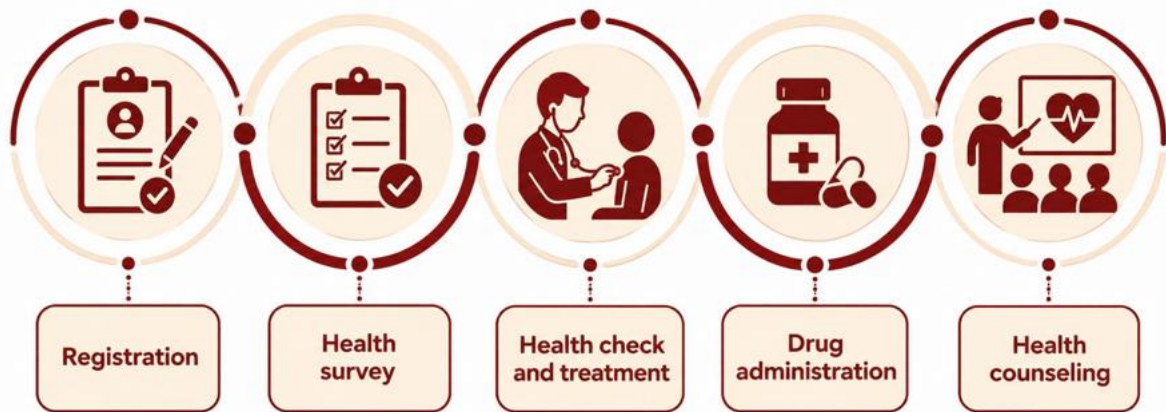


Figure 2. Stages of PKM Implementation

Stages of preparation for the service team

1. Conducting discussions and coordination or collaboration with LAZNAS Bakrie Amanah, village officials and PKM teams from the Faculty of Mathematics and Natural Sciences, University of Garut and the KKN 31 group to plan the date of the implementation of PKM and the number of residents to be invited.
2. The service team held a coordination meeting again with other teams for further preparation regarding the theme to be delivered.
3. Determine the number of participants who will be tested and treated for free, as well as the distribution of health coupons (Qowiyah, A et al., 2026).

Implementation stage

1. The implementation of the activity began with registration accompanied by signatures to ensure the number of people present
2. A survey of residents' health conditions was conducted using a google form
3. The next activity will be checked for residents by a medical team consisting of 2 doctors, 2 nurses and 2 pharmacies (Ihsan, S et al., 2026).
4. After the results of the examination, drugs are given according to the patient's disease. The following is the team of collaborators, as shown in figure 3.



(a)



(b)



(c)

Figure 3. Collaborator team, (a) UNIGA, (b) KKN 2026 Group 31, (c)Bakrie Amanah Foundation

3. RESULTS AND DISCUSSION

The series of PKM activities carried out is a collaboration between various parties, namely the Faculty of Mathematics and Natural Sciences, University of Garut, LAZNAS Bakrie Amanah, Group 31 KKN 2026 and also with village officials. The event started at 08.00-12.00 WIB. Based on the data obtained, there were 107 residents who took part in a series of free examinations and treatment. The following survey results on the lifestyle of Sarimukti villagers are shown in table 1.

Table 1. Results of the residents' lifestyle survey

No.	Questions	Yes	No
1	Residents have BPJS	86,2%	13,8%
2	Residents routinely check their health	86,2%	13,8%
3	Residents regularly exercise	96,6%	3,4%
4	Source of carbohydrates Rice	100%	0%
5	Residents drink coffee every day	41,4%	58,6%
6	Residents drink milk	27,6%	72,4%
7	Consumption of water in a day		
	8 Glass	55,2%	
	6 Glass		31%
	4 Glass		10,3%
	2 Glass		3,4%

Based on table 1, 86.2% of Sarimukti villagers who participated in PKM activities have been registered as members of the Health Social Security Administration Agency (BPJS) and residents also routinely check their health. This shows that BPJS is needed to support citizens' health. The main benefits of BPJS Kesehatan include increasing access to public health services widely, reducing the burden of expensive medical costs (financial risk protection), and ensuring comprehensive health recovery from basic to advanced services (Nurany F et al., 2024). Regarding the habits of residents, as many as 96.6% of residents regularly exercise, 2026 the survey results show that the type of sports chosen includes: walking and gymnastics. Based on various scientific studies, regular exercise has been proven to delay or prevent more than 40 chronic disease conditions, reduce the risk of type 2 diabetes by up to 58%, nourish the heart, improve brain cognitive function, and relieve stress and improve mood (Darmadi Kosen, et al., 2025).

The service method carried out was examination and treatment which consisted of 2 doctors, 2 medical teams and 2 pharmacists and assisted by the 2026 KKN student team and UNIGA Pharmacy. The following is the documentation of the treatment carried out as shown in figure 4.



Figure 4. Health check-up and treatment, (a) Health Check by Nurse, (b) Examination by Doctor (c) Medication administration by Pharmacist

The results of the health checks for the elderly can be seen in table 2 below.

Table 2. History of Diseases of Sarimukti Villagers

No	Parameters of Elderly Health	Results
1	Elderly Age	
	Less than 50 Years	23 People
	50 - 60 Years	31 People
	61 - 70 Years	31 People
	71 - 80 Years	17 People
2	81 - 90 Years Old	5 People
	Blood Pressure	
	Low blood pressure (< 90/60 mmHg)	0 People
	Normal blood pressure 130/80 - 140/90 mmHg	57 People
3	High blood pressure above 140/90 mmHg	50 People
	SpO₂ (Peripheral Oxygen Saturation)	
	Low SpO₂ below 92%	2 People
4	SpO₂ Normal	105 People
	Provisional diagnosis of the elderly	
	a. Hypertension	e. Dyspepsia
	b. Osteoarthritis	f. Low back Pain
	c. Vertigo	g. ISPA
	d. Katarak	h. TTH
		i. Myalgia
		j. HT
		k. Dyslipidemia
		l. Allergies

The definition of the elderly refers to the age limit of 60 years and above, according to the law in Indonesia, but the study also classifies them based on stages (early elderly 60-74, aged 75-90, very old >90) or functional aspects (potential, non-potential, risky), and sees it as a phase of natural decline in biological and psychosocial function (BPK., 2025). Residents of Sarimukti village who take part in this PKM activity for the elderly category ranging from 50 years old and above to 90 years old, when they come to the village hall, on average they are sidelined by their families. World Health Organization (WHO) classification: Middle Age: 45-59 years. Elderly: 60-74 years old. Old: 75-90 years old. Very Old: Over 90 years old (WHO 2025).

Standard health checks carried out by the team of doctors include checking blood pressure. The results showed that there were some elderly people showing symptoms of hypertension. Normal blood pressure of the elderly blood

pressure tends to be slightly higher than that of young adults due to stiffer blood vessels, with an ideal range of about 130/80 mmHg to 140/90 mmHg, but the 120/80 mmHg figure is still considered normal if there are other symptoms or conditions (Jayadilaga Y., 2025). Systolic (upper) pressure can be higher, but diastolic (bottom) is no more than 90 mmHg, which is important to monitor regularly as the elderly are more prone to hypertension (Nada, Q., & Oktaviani 2023). In addition, residents were also checked how much their pulse rate was, as many as 57 residents had normal blood pressure and 50 high blood pressure, the team of doctors suggested that the elderly take part in elderly gymnastics.

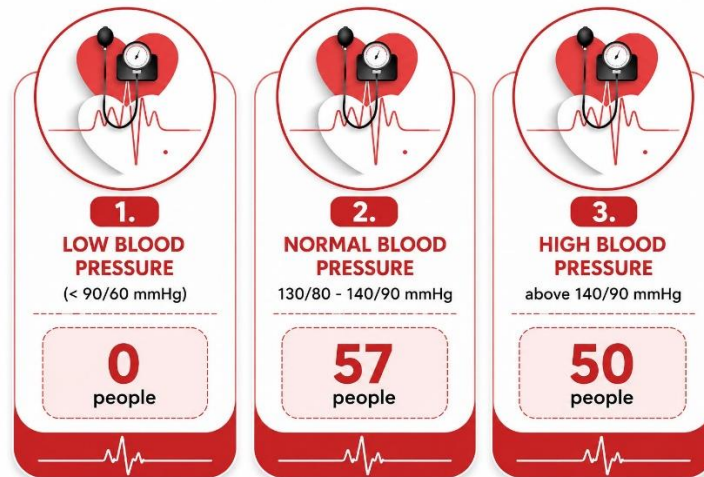


Figure 5. Results of blood pressure of residents

Elderly exercise research showed an average pulse rate of 75.05 bpm after 4 weeks, with the majority (71%) experiencing improved fitness (Hakim, 2023). Hypertension control can be done by behavioral changes such as avoiding cigarette smoke and quitting smoking. Eat a diet low in sugar, fat and salt and high in fiber, a healthy diet with balanced calories, avoiding alcohol and diligent physical activity and lowering blood pressure can be done by changing these habits (DINKES JABAR 2021).

In Indonesia, rice is a staple food consumed by nearly 90% of the Indonesian population (Ishmah and Anugrah 2020). Based on table 1, it shows that 100% of the main source of carbohydrates from the residents of Sarimukti village is rice. If Carbohydrate intake is not controlled properly, it can cause sugar disease in the future. Diabetes is a collection of metabolic disorders that are categorized based on impaired insulin secretion, insulin performance or both. Diabetes is divided into two types, the first type is caused by damage to β -pancreatic cells that do not secrete the hormone insulin which can help lower blood sugar levels. While the second type is caused by insulin resistance which is no longer able to work in lowering glucose levels in the blood. Chronic diabetes can damage other organs such as the eyes, kidneys, nerves, liver and blood vessels (American Diabetes Association. 2018). Residents who received treatment were also measured SpO2 levels, in general the results were good. If SpO2 (Peripheral Oxygen Saturation) the normal value is 95-100%, with values below 90% indicating hypoxemia (Septia, N et al., 2016). Based on table 2, only 2 residents had oxygen saturation below normal and 105 people had normal SpO2 levels.

Many Indonesians suffer from heart disease due to the accumulation of trans fats. Consuming trans fats has many causes, one of which is clogged arteries due to frequent or habitual consumption of fried foods (Hilma SR et al. 2022). During the survey, residents were asked how their diet was related to high-fat foods such as fried foods. Figure 6 shows that 31% of residents consume fried foods every day, if this is not educated, there will be an increase in cholesterol levels in the body. Cholesterol is a food reserve that can be converted into energy (ATP), Adenosine Triphosphate (ATP) is usually obtained from the results of food metabolism sin the body, this energy reserve can be

used as energy in physical activity (Ana et al., 2025). According to the World Health Organization (WHO), physical activity is any skeletal muscle movement that requires energy, the more physical activity that is done will lead to less formation of total cholesterol and Low-Density Lipoprotein (LDL) cholesterol as well as an increase in High-Density Lipoprotein (HDL) cholesterol (Rodwell, V. W et al., 2018). Excess fat or cholesterol in the body is called dyslipidemia.

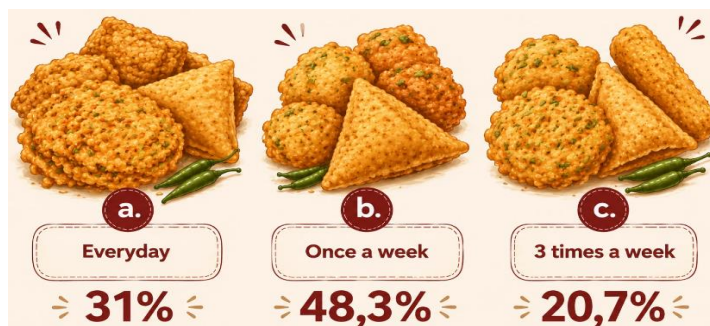


Figure 6. Frequency of Residents Consumption of Fried Foods

Disease prevention can be done with a lot of exercise and eating a healthy diet and a good lifestyle, quitting smoking, drinking alcohol and consuming low-salt foods, and increasing the intake of vegetables and fruits. In addition, it is recommended to consume milk high in calcium, based on table 1, only 27.6% of residents drink milk. Milk is a food ingredient that contains essential nutrients for human life, including protein, fat, carbohydrates, minerals, vitamins, and growth factors (Sahala et al. 2024). As many as 41.4% of residents consume coffee every day, based on various scientific research results, drinking coffee in reasonable amounts (2-3 cups per day) has been proven to increase energy, sharpen concentration, and reduce the risk of chronic diseases such as type 2 diabetes, liver disorders, and decreased brain function (Emadi et al., 2025). While the adequacy of drinking water is quite high, which is 55.2% The human body consists of approximately 60% water by weight, with an average fluid loss of approximately 2.5 liters per day. Therefore, to meet optimal hydration needs, a person is recommended to drink 8 to 10 glasses of water per day, with each glass containing approximately 240 mL (Nuzsep Almigo 2025). Disease monitoring needs to be carried out to monitor the pathophysiological condition of a person's body, so that appropriate clinical actions can be taken to create a healthy environment and prevent negligence in disease management.

In figure 7, it is a documentation when PKM is completed consisting of a medical team and KKN students of group 31.



Figure 7. Medical Team and Group 31 KKN 2026

4. CONCLUSION

The PKM activities that have been carried out are a collaboration between various parties to provide education to the public about health problems and continue with free examinations and treatment. A total of 107 people from Sarimukti Village have participated. The results of the residents' health survey show that in general, the health level of residents is in a healthy condition. Only the expected diet should be slightly changed in relation to the consumption of carbohydrates and fried foods.

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