

IMPLEMENTATION OF ELDERLY NON-COMMUNICABLE DISEASE (NCDs) SCREENING AT GPP GLORIA SEMPURNA CHURCH

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ABSTRACT

Background: Hypertension (HTN), defined as a systolic blood pressure (SBP) >140 mmHg or a diastolic blood pressure (DBP) >90 mmHg, is a major health problem that is increasing worldwide (Sembiring et al., 2024). As older adults age, their physiological function declines, which increases the risk of non-communicable diseases (NCDs) such as hypertension, diabetes mellitus, arthritis and cardiovascular disease (Wikandari, Rosidah dan Auliya, 2025). **Objective:** This community service activity aims to detect and educate the elderly about non communicable diseases through health checks at the GPP Gloria Sempurna church, Jl. Sempurna Ujung No. 229 Medan, North Sumatera in 2026. **Method:** The activity was carried out on may 10 2026, The methods used included health checks, including the recording of personal data, blood pressure measurements, simple laboratory tests, and education. The laboratory tests included measuring blood glucose, cholesterol, and uric acid levels using the EasyTouch GCU 3-in-1 device. Education regarding non-communicable diseases was provided through outreach activities (Hikmatul Khoriyah, 2024). **Results:** Advancing age is one of the major risk factors for hypertension. Age related vascular changes increase blood pressure over time, making older adults more susceptible to hypertension and its associated complications (Sinaga, 2025). Approximately 45% of elderly people have high cholesterol, 50% have hypertension, and 5% have gout. **Conclusion:** It is hoped that the elderly can adopt a healthy lifestyle and understand the importance of information about NCDs (Non Communicable Diseases) for their health.

Keywords: Elderly, Non Communicable Diseases, Health Screening, Hypertension, Health Education

INTRODUCTION

For many centuries, infectious diseases were the leading cause of mortality worldwide, with recurrent epidemics substantially reducing life expectancy. However, following the Second World War, significant advances in medical science including the development of vaccines, the widespread use of antibiotics, and improvements in living standards led to a decline in Communicable Diseases. As a result, Non-Communicable Diseases (NCDs) gradually emerged as the predominant health challenge, particularly in industrialized nations. (Boutayeb dan Boutayeb, 2005)

Non-Communicable Diseases (NCDs) are a public health problem that increases annually and are the largest contributor to global mortality. According to the Global Status Report on Non-Communicable Diseases, NCDs can occur due to lack of physical activity, smoking and ineffective diets, which can lead to increased blood pressure, blood sugar and blood lipids (Kurniasih, 2022).

Based on the results of the 2010 Basic Health Research (RISKESDAS), deaths due to Non-Communicable Diseases are increasing, while deaths due to infectious diseases are decreasing. In Indonesia, the proportion of Non-Communicable diseases has increased significantly, from 41,7% to 59,5% (Girsang, 2022).

Compared to the 2018 Basic Health Research (RISKESDAS), the 2023 Indonesian Health Survey (SKI) result show a decrease in the prevalence of hypertension in the population aged 18 years and older, based on blood pressure measurements. Conversely, there was an increase in the prevalence of diabetes mellitus (DM) in the population aged 15 years and older, based on blood sugar measurements. In the population aged 15 years and older were acquired diseases, of which 53,5% were Non-Communicable Diseases (NCDs). Based on the presence of risk factors, the incidence of hypertension and diabetes was higher in groups with central obesity or lack of physical activity (Survei Kesehatan Indonesia, 2023).

Common diseases among the elderly are Non-Communicable Diseases (NCDs), which are degenerative in nature, or diseases caused by age-related factors such as stroke, diabetes mellitus (DM), coronary heart disease, and physical injury (Anja et al., 2022). Non-Communicable diseases that affect most people include heart disease, stroke, high blood pressure, diabetes, cancer and chronic kidney disease (Serly Agita, 2024).

Through community service activities, students and their supervising lecturers conducted free screening health checks, including blood pressure, blood sugar and uric acid tests. This aimed to monitor the health of the elderly and detect Non-Communicable diseases that may arise early in the elderly. Furthermore, that free check up where expected to raise awareness among the elderly about the importance of a healthy lifestyle to prevent disease (Pramaswari dan Fatah, 2023).

METHODS

Therefore it is very important to hold community service activities in the form of free health checks, including measuring blood pressure, blood sugar levels, cholesterol and uric acid, as well as providing education about Non-Communicable Diseases (Hikmatul Khoriyah, 2024). This community service activity was held by the GPP Gloria Sempurna Church at Jl Sempurna Ujung No.229, Medan Denai District, Medan City, North Sumatera Province, on Sunday, May 10 2026.

30 to 40 elderly people from the area participated in this event, and it was conducted in various ways. The method used was participatory. Information on Non-Communicable Diseases (NCDs) was provided by the supervising teacher via a PowerPoint presentation. Prior

to the information session, a questionnaire with 10 statements with multiple-choice answers was administered to test the elderly participants understanding of the material. After the presentation, a post-test was administered to test the elderly participants understanding of the material. The methods used included recording personal data, blood pressure measurements, simple laboratory tests, and information sessions. Laboratory test involved measuring blood glucose, cholesterol, and uric acid levels using the EasyTouch GCU 3-in-1 device. Community leaders and health workers were also involved in the activity. The program concluded with an evaluation session.

RESULT (Respondent Characteristics)

On May 10, 2026, a community activity took place at the Gloria GPP Sempurna Church in the Medan Denai district, Medan City. Forty seniors participated. Approximately 45% of the seniors had high cholesterol levels, 50% had hypertension, and 5% had gout. Although all participants were registered with the BPJS (Social Security) program, they had not yet made use of it for health checks regarding non-communicable diseases. This is due to a lack of information from primary care. The table below shows that participants aged 61-70 were very enthusiastic about a health check.

Table 1. Age Category/Percentage Of Participants Who Took Part In The Activity

No	vulnerable age (year)	Amount	Percentage
1	41-50	8	20
2	51-60	12	30
3	61-70	20	50
	Jumlah	40	100

DISCUSSION

The high prevalence of non-communicable diseases (NCDs) in the elderly contributes to mortality and morbidity. Education about NCDs, together with screening for body mass index (BMI), blood glucose, and blood pressure, is crucial for the early detection of risk factors and the prevention of complications such as hypertension and type 2 diabetes (Prabandari dan Sari, 2026).

Behavioral, metabolic, and socioeconomic factors, including hypertension, obesity, unhealthy diets, smoking, and limited access to healthcare, are major contributors to the increasing burden of Non-Communicable Diseases (Bai *et al.*, 2023).

The present community service program identified hypertension (50%) and hypercholesterolemia (45%) as the most common health problems among the participants. These findings indicate that cardiovascular risk factors remain highly prevalent among older adults in the community.

Lifestyle modification remains one of the most effective approaches for preventing Non-Communicable Diseases (NCDs). Health education interventions that encourage health eating, regular physical activity, smoking cessation, and adherence to medical advice can improve health behaviors and reduce Non-Communicable Diseases (NCDs) risk (Nadal *et al.*, 2024).

The findings of this community service program indicate that health education combined with routine health screening provides a more comprehensive approach to preventing

and controlling Non-Communicable Diseases (NCDs) than relying solely on clinical monitoring (Siti Nurmawan, 2025).

CONCLUSIONS

Regular health check-ups are also necessary to detect non-communicable diseases at an early stage and to provide appropriate referrals or follow-up examinations if symptoms or risk factors are identified (Aghniya, 2024).

Regular blood pressure monitoring, continuous health education, and community based preventive programs are important strategies for reducing hypertension related complications and promoting healthy aging (Sinaga *et al.*, 2024).

The community service program successfully provided health education and free health screening for older adults at GPP Gloria Sempurna Church. The screening results indicated that hypertension and cholesterol were the most common health problems among the participants, highlighting the need for continuous monitoring and early detection of Non-Communicable Diseases (NCDs).

Strengthening primary healthcare services and implementing routine health screening are essential strategies for reducing the burden of Non-Communicable Diseases (NCDs) through early detection and timely intervention (Siiba, Kangmennaang dan Id, 2024).

Reducing the burden of Non-Communicable Diseases requires sustained health education, early identification of risk factors, and supportive environments that encourage healthy lifestyle practices throughout the life course (Prasad *et al.*, 2023).

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CONFLICT OF INTEREST AND FUNDING DISCLOSURE

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AUTHOR CONTRIBUTIONS

Ferly Fazrin Haslim : Conceptualization, data curation, investigation, methodology, formal analysis, validation, visualization, writing – original draft, and writing – review & editing.

Lisbeth Gurning : Data curation, investigation, data collection, validation, and writing – review & editing.

Syahrin Sakinah Haslim : Investigation, data collection, validation, and writing – review & editing.

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