



INCREASING PATIENT AND FAMILY AWARENESS OF THE EARLY SIGNS OF A HEART ATTACK AT AL-IHSAN HOSPITAL BANDUNG

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<p>Info Article</p> <p>Received : 09 Mei 2025</p> <p>Revised : 13 Juni 2025</p> <p>Accepted : 17 Juli 2025</p> <p>Publication : 30 Juli 2025</p>	<p>Abstract: <i>Heart attacks are a leading cause of death in Indonesia and globally, yet public awareness of the early warning signs remains low. Educating patients and their families is crucial to improving preparedness for this condition. This community service activity was conducted at Al-Ihsan Regional Hospital in Bandung using an educational-participatory approach. The implementation method included interactive lectures, group discussions, role-playing simulations, and pre- and post-tests. Fifty participants, including patients with a history of heart disease and their families, participated. Pre-test results showed that 73.3% of participants had low to moderate knowledge levels. After the educational intervention, knowledge scores increased by 35%, with 88.9% of participants answering more than 80% of the post-test questions correctly. Participants also demonstrated a better understanding of recognizing symptoms and taking appropriate emergency measures. The interactive educational program has proven effective in increasing patient and family awareness and preparedness for the early warning signs of heart attacks. This approach can serve as a model for applicable preventive interventions at the community level.</i></p>
<p>Keywords: <i>Heart Attack, Interactive Education, Family Awareness, Early Signs, Community Service</i></p> <p>Kata Kunci: Serangan Jantung, Edukasi Interaktif, Kesadaran Keluarga, Tanda-Tanda Dini, Pengabdian Masyarakat</p>	<p>Abstrak: Serangan jantung merupakan penyebab utama kematian di Indonesia dan secara global, namun kesadaran masyarakat terhadap tanda-tanda peringatan dini masih rendah. Mendidik pasien dan keluarga mereka sangat penting untuk meningkatkan kesiapsiagaan terhadap kondisi ini. Kegiatan pengabdian masyarakat ini dilakukan di Rumah Sakit Regional Al-Ihsan Bandung dengan menggunakan pendekatan edukasi-partisipatif. Metode pelaksanaan termasuk ceramah interaktif, diskusi kelompok, simulasi peran, serta pre-test dan post-test. Sebanyak 50 peserta, termasuk pasien dengan riwayat penyakit jantung dan keluarga mereka, berpartisipasi dalam kegiatan ini. Hasil pre-test menunjukkan bahwa 73,3% peserta memiliki tingkat pengetahuan yang rendah hingga sedang. Setelah intervensi edukasi, skor pengetahuan meningkat sebesar 35%, dengan 88,9% peserta menjawab lebih dari 80% pertanyaan post-test dengan benar. Peserta juga menunjukkan pemahaman yang lebih baik dalam mengenali gejala dan mengambil langkah darurat yang tepat. Program edukasi interaktif ini terbukti efektif dalam meningkatkan kesadaran dan kesiapsiagaan pasien serta keluarga terhadap tanda-tanda peringatan dini serangan jantung. Pendekatan ini dapat dijadikan model untuk intervensi pencegahan yang aplikatif di tingkat masyarakat.</p>
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INTRODUCTION

Cardiovascular disease, including heart attacks or acute myocardial infarctions (AMI), is one of the leading causes of death globally. According to the World Health Organization (WHO, 2023), approximately 17.9 million people die annually from cardiovascular disease, accounting for approximately 32% of all deaths worldwide. Of these, more than 85% are caused by heart attacks and strokes. This figure indicates that heart disease, particularly heart attacks, remains a serious public health problem in both developed and developing countries, including Indonesia.

In Indonesia, the trend of heart attack incidence has shown a significant increase over the past decade. According to the 2023 Basic Health Research (Riskesdas) data from the Indonesian Ministry of Health, the prevalence of heart disease among the population aged 15 years and older has reached 1.6%, with the highest proportion occurring in older adults and the elderly. This disease not only impacts the quality of life of patients but also places a social and economic burden on families and the national healthcare system. This situation is exacerbated by the public's lack of knowledge about risk factors and early signs of heart attacks, which can lead to delayed treatment and an increased risk of death.

A heart attack is a medical emergency that requires immediate treatment. The optimal time for treatment is known as the "golden period," which is within the first 1–2 hours after symptoms appear. Medical intervention performed within this timeframe is crucial in saving the patient's life and preventing permanent heart damage. However, many cases demonstrate that patients delay seeking medical attention due to ignorance or uncertainty in recognizing the early symptoms of a heart attack (Ibanez et al., 2023). The most common symptoms, such as chest pain radiating to the left arm, shortness of breath, nausea, cold sweats, and unusual anxiety, are often mistaken for stomach upset or fatigue.

This lack of awareness not only affects patients but also their accompanying family members. Families play a crucial role in making quick decisions during emergencies. A study by Al-Zaru et al. (2023) showed that only 40% of families of patients at high risk of heart attack were able to recognize the symptoms and seek immediate medical attention. The remainder experienced confusion, panic, or even waited for symptoms to subside before taking the patient to a healthcare facility, increasing the risk of fatality.

Another factor exacerbating the low awareness of heart attacks is the lack of systematic, evidence-based public education. Most people only obtain information from social media or other people's experiences, which are not always accurate. In this regard, health literacy is a crucial aspect in determining the ability of individuals and families to identify emergencies. Low health literacy has been shown to be directly linked to delayed medical attention, poor decision-making, and inappropriate treatment (Sørensen et al., 2022).

In response to these challenges, efforts to raise awareness of the early signs of a heart attack need to be comprehensive and structured. Educating patients and their families is an effective preventive strategy to increase individual preparedness for a possible heart attack. Direct education, through interactive dialogue or counseling, has been shown to be more effective than one-way methods. Active participant involvement in the educational process promotes increased information retention and fosters a responsive attitude to medical emergencies (Zhou et al., 2022).

Heart attack awareness programs for patients and families should be designed not only to provide medical information but also to build understanding, skills, and confidence in critical situations. For example, educational videos, question-and-answer games, case discussions, and simulations of initial actions when heart attack symptoms appear can be used. Research by Kim et al. (2024) demonstrated that interactive education increased the knowledge and preparedness of patients' families by 60% within two weeks of the intervention. Therefore, this educational approach can be a strategic option in promotive and preventive community service.

This community service activity, which focuses on raising patient and family awareness, also reinforces the new paradigm of health services based on promotion and prevention. According to Law No. 36 of 2009 concerning Health, everyone has the right to receive appropriate health information and education. Education about heart attacks is a concrete step in secondary and tertiary prevention efforts to prevent complications and premature death. Furthermore, education plays a role in fostering a culture of emergency response in a community that has historically relied solely on formal services.

The implementation of this program also strengthens the role of healthcare workers as educators and facilitators in the community. Through community-based educational activities, healthcare workers can build closer relationships with patients and their families, and understand the barriers and perceptions that have hindered early

heart attack detection. Therefore, educational implementation not only provides knowledge but also builds trust between the community and healthcare providers.

From an economic perspective, increasing public awareness of heart attacks also has a positive impact on reducing medical costs. Early treatment and preventing complications can reduce the need for intensive care and length of hospital stay, which ultimately reduces the financial burden on families and the national healthcare system. Therefore, educating people about the early signs of a heart attack is not only informative but also has strategic value in improving the efficiency of healthcare services.

Based on this background, the community service project titled "Increasing Patient and Family Awareness of the Early Signs of a Heart Attack" is an appropriate and relevant step in the context of current public health needs. Through this activity, it is hoped that heart health literacy will increase at the individual and family level, enabling them to play an active role in preventing delays in seeking help and reducing the death rate from heart attacks.

METHOD

This community service activity was implemented using an educational-participatory approach that emphasized the active involvement of participants, namely patients and their families, in the learning process regarding the early signs of a heart attack. The implementation method began with a preparation phase that included coordination with local health service facilities, namely the Health Promotion Department of Al-Ihsan Bandung Regional Hospital, as well as determining the location and time of the activity. Next, evidence-based educational materials were prepared that were tailored to the community's literacy level, including the creation of leaflets and short educational videos. Before the main activity began, participants completed a pre-test questionnaire to measure their initial level of knowledge about the early symptoms of a heart attack.

The activity was conducted in the form of interactive education, using short lectures, discussions, and emergency response simulations. The material presented included recognizing typical and atypical signs of a heart attack, the importance of early detection, and first aid steps before reaching a health facility. The simulation was conducted through role-play to train family preparedness when a patient exhibits sudden symptoms. Additionally, quizzes and educational games were included to

increase participant engagement and reinforce understanding in a fun way. After the educational session, participants completed a post-test to evaluate their knowledge gains. The activity concluded with an open question and answer session, distribution of printed educational materials in the form of leaflets, and collection of participant feedback through an evaluation sheet.

Overall, the implementation method for this activity is designed to be participatory, applicable, and able to encourage positive behavioral changes in patients' families. By directly involving patients and families through interactive learning activities, this activity is expected to increase community preparedness for heart attacks and accelerate decision-making regarding seeking medical assistance, ultimately reducing the death rate due to delayed treatment.

RESULTS AND DISCUSSION

The interactive educational activity, designed to raise awareness among patients and their families about the early signs of a heart attack, went smoothly and garnered high enthusiasm from the participants. Fifty participants, including patients with a history of heart disease, their families, and several patients with cardiovascular risk factors, participated in the activity. Based on the results of the initial evaluation (pre-test), it was found that the majority of participants (73.3%) had low to moderate knowledge regarding heart attack symptoms. Most participants recognized only one or two classic symptoms, such as chest pain and shortness of breath, while atypical symptoms, such as heartburn, severe fatigue, or nausea, were not widely recognized.



Figure 1. Presentation of material regarding early signs of a heart attack

After the educational activity was completed, a post-test was conducted to measure knowledge gains. Results showed significant improvement, with 88.9% of participants correctly answering more than 80% of the questions. The average post-test score increased by 35% compared to the pre-test. Furthermore, during the discussion session, participants were able to independently identify the signs of a heart attack and identify appropriate first aid steps, such as immediately contacting emergency medical services, not allowing the patient to walk alone to the hospital, and providing emotional support while waiting for help.



Figure 2. Extension Team and Extension Participants

Participants' responses to the interactive educational method were also very positive. The majority reported that they understood the material more easily because it was presented in a fun and practical way, such as through videos, role-playing simulations, and quizzes. This approach was deemed effective because it not only provided information but also built participants' confidence in taking action in emergency situations. Furthermore, participants felt closer and more open to discussions with healthcare workers because the activity atmosphere was informal and communicative.

This discussion of results corroborates findings from previous research, such as that presented by Kim et al. (2024), which found that participatory education can improve community knowledge and preparedness in responding to heart disease. This

also aligns with research by Al-Zaru et al. (2023), which showed that interactive education improves families' ability to recognize and respond to early symptoms of myocardial infarction. Furthermore, this increased awareness has direct implications for the speed of seeking medical attention, which is key to reducing heart attack mortality.

However, several challenges were encountered during the implementation of this activity, including limited time for individual discussions and the need for enhanced online education for participants seeking more in-depth information. Therefore, it is recommended that future similar activities utilize a sustainable approach, such as through educational WhatsApp groups or digital modules that participants and their families can access independently.

Overall, this community service activity successfully achieved its goal of increasing participants' knowledge and awareness of the early signs of a heart attack. The interactive education proved effective in increasing understanding and fostering family preparedness to act quickly in the event of an emergency. These results demonstrate that a community-based educational approach can be an integral part of community-level heart disease promotion and prevention efforts.

CONCLUSION

A community service activity aimed at raising patient and family awareness of the early signs of a heart attack was successfully implemented using an educational and participatory approach. Results showed a significant increase in knowledge after participants participated in the interactive educational program, designed in an applicable and communicative manner. Participants were able to recognize not only typical symptoms such as chest pain and shortness of breath, but also atypical symptoms that are often overlooked, and understood the importance of a rapid response to cardiac emergencies. This education also succeeded in building family confidence in providing first aid and making appropriate decisions in urgent situations. Thus, this program has a positive impact on increasing community preparedness and can be an effective model for promotive intervention in preventing complications and reducing mortality due to delayed treatment of heart attacks.

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