LUX MENSANA **Volume 4, Issue 4, 2025**

Page. 189-198

Original Research Article

PATIENT DECISIONS TO SEEK CARE AT A HEALTH CARE FACILITY DURING AN ACUTE CORONARY SYNDROME (ACS) ATTACK

Diana Novalina[1,2)], Harmayetty[3)], Abu Bakar[3)*]

[1)] Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia, [2)] Department of Nursing, dr H Koesnadi Regional General Hospital, Bondowoso, Indonesia, [3)] Department of Medical-Surgical, Emergency, Disaster, and Critical Care Nursing, Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

*Corresponding Author, E-mail: abu.bakar@fkp.unair.ac.id

ABSTRACT

Introduction. In rural areas, several residents have died suddenly with chest pain and shortness of breath, some before reaching medical care, a pattern likely associated with sudden cardiac arrest. Reported reasons for delayed care include lack of transportation and self-treatment at home. This study analyzed factors influencing patients' decisions to seek care during an Acute Coronary Syndrome (ACS) attack. **Method.** This quantitative, cross-sectional study involved 94 respondents selected using purposive sampling. Independent variables were education, economic status, access to health care facilities, family support, and the health care system; the dependent variable was patients' decision to seek care at a health care facility. Data were collected using a questionnaire and analyzed with Spearman's Rho test at alpha less than or equal to 0.05. **Result & Analysis.** Significant relationships were found between all five factors and patients' decisions to seek care during an ACS attack: education ($p = 0.047$, $r = -0.205$), source of financing ($p < 0.001$, $r = -0.366$), access to health care facilities ($p = 0.037$, $r = 0.215$), family support ($p = 0.041$, $r = -0.211$), and the health care system ($p = 0.001$, $r = -0.483$). **Discussion.** Education, economic status, access, family support, and the health care system each significantly shape patients' decisions to seek care during an ACS attack. Qualitative research is recommended for deeper understanding of these decisions.

Keywords: Behaviour, Caring, Cardiovascular, Health Care Seeking, Nursing

INTRODUCTION

A preliminary study conducted by the researchers in Bondowoso Regency, based on interviews with community members, found that several residents had died suddenly with chest pain and shortness of breath, some of them before reaching a health facility, a pattern consistent with sudden cardiac arrest. Several factors delay patients with coronary heart disease from reaching emergency care in time, including residence far from health facilities, limited transportation, self-treatment with traditional medicine, underestimation of chest pain symptoms, and limited knowledge of the disease (Arrebola-Moreno *et al.*, 2020; Khaled *et al.*, 2022). Related evidence indicates that patient dissatisfaction with community health center services, including long waiting times and inattentive staff, has contributed to a declining number of visits in recent years (Dewi, Nadapdap and Januariana, 2022).

Cardiovascular disease remains a major global health burden. In the United States, an estimated 48.6% of adults aged 20 years and older live with some form of cardiovascular disease, including coronary heart disease, heart failure, and stroke, with the highest prevalence among Black women (59.0%) and Black men (58.9%), and cardiovascular disease accounts for approximately 596,786 deaths annually (Martin *et al.*, 2024). In Indonesia, disparities in health service access between urban and rural populations remain evident: rural residents show consistently lower odds of using outpatient and inpatient hospital services than their urban counterparts, a pattern associated with education, wealth, and health insurance ownership (Wulandari *et al.*, 2022). Access barriers among rural populations further include distance, transportation cost, and limited health literacy, alongside the availability, acceptability, and affordability of services (Aji *et al.*, 2023). Interviews conducted by the researchers with health promotion staff at the Bondowoso Community Health Center likewise identified accessibility, service quality, and health insurance coverage, together with educational, sociocultural, and family support factors, as the main influences on the use of health facilities in the area.

Delayed treatment of Acute Coronary Syndrome (ACS) carries serious consequences, including permanent myocardial damage, heart rhythm disturbances that may prove fatal, reduced physical capacity, and limitations in daily activity (Beza *et al.*, 2021). Depression and anxiety often follow such damage, further affecting patients' long-term prognosis and increasing their risk of recurrent cardiovascular events (Sulastri, Trisyani and Mulyati, 2020). Comprehensive and reliable health data therefore remain essential for evidence-based planning, implementation, and evaluation of health policy, since they clarify a population's health profile and identify the groups that should be prioritized in health development efforts.

Prior research indicates that optimizing the use of health services requires improved facilities, better service quality, clearer communication with patients, increased public awareness through education programs, and regular monitoring and evaluation of health facilities and services (Alim, Indar and Harniati, 2023). Much of this evidence, however, addresses the determinants of routine health service utilization rather than the decisions patients make under the acute

time pressure of a cardiac event. The contribution of the present study lies in examining, within a single integrated model, how education, economic status, access to facilities, family support, and the health care system jointly shape patients' treatment-seeking decisions during an ACS attack, a context in which delay carries a materially higher clinical cost than it does for routine care. Applying a Health Care Seeking Behavior framework in a rural Indonesian setting, this study is intended to generate evidence that can inform more targeted, context-specific strategies for reducing prehospital delay in comparable regions. Based on this rationale, the researchers examined the factors influencing patients' decisions to seek treatment at a health care facility during an ACS attack in Bondowoso Regency.

METHOD AND ANALYSIS

This study employed a quantitative research design with a cross-sectional approach, aiming to examine the factors influencing patients' decisions to seek care at health care facilities during an Acute Coronary Syndrome (ACS) attack in Bondowoso Regency (Creswell and Creswell, 2023). The study population consisted of patients who had been screened for heart disease based on electrocardiogram (ECG) results, while the sample comprised patients who had experienced an ACS attack. The inclusion criteria specified patients who had suffered an ACS attack within the preceding year and had not been diagnosed with heart failure. Purposive sampling was used as the sampling technique (Ivynian *et al.*, 2020; Zhang *et al.*, 2023). The independent variables were the influencing factors under study, namely education, economic status, access to health care facilities, family support, and the health care service system, while the dependent variable was the patient's decision to seek care at a health care facility. Data were collected using a structured questionnaire, adapted from instruments originally developed by Abdhofar (2023) and Florida (2024) and modified for the purposes of this study. Responses for the family support and health care system variables were collected on a graded response scale and subsequently categorized for analysis, consistent with the categories reported in the Results section. Inferential analysis was conducted using Spearman's Rho correlation test, with results considered statistically significant at a p-value of ≤ 0.05.

RESULTS

The demographic characteristics of the respondents in this study included age, gender, and occupation, and are presented in Table 1 as a frequency distribution for each characteristic.

Table 1 Characteristics of research respondents

No.	Characteristics	Category	Frequency	Percentage
1	Age (according to Ministry of Health)	Adults (ages 19-44 years)	34	36.17%
		Pre-elderly (ages 45-59 years)	50	53.19%
		Elderly (aged 60 years and above)	10	10.64%
		Total	**94**	**100%**
2	Male gender		63	60.58%
		Woman	41	39.42%
		Total	**94**	**100%**
3	Work	Farmer	10	10.64%
		Self-	45	47.87%
		employed workers	2	2.13%
		civil servant		5.32%
		Retired	5 12	12.77%
		Housewife/not working	20	21.28%
		Total	**94**	**100%**

Source: Processed by the researchers (2025)

As shown in Table 1, the majority of respondents fell into the pre-elderly age category, comprising 50 respondents (53.19%). Most respondents were male,

accounting for 63 respondents (60.58%), and the majority were employed as laborers, accounting for 45 respondents (47.87%).

Table 2 Cross tabulation of education

Education	To Facilities	Service	Health	
	Yes	No		Total
	f % f % 23 24.5% 2 2.1% 49 52.1%		n	%
[illegible]	0 0.0% 15 16.0% 0 0.0% 5.3% 0.0%		25	26.6%
[illegible]	92 97.9% 2.1%		49	52.1%
[illegible]			15	16.0%
PT	5	0	5 5.3%	
Total		2	100 100.0%	
Spearman Rho Correlation coefficient (r): - 0.205			*significance* (p): 0.047	

Source: Processed by the researchers (2025)

Table 2 presents the cross-tabulation between educational level and the decision to seek care. Of the 94 respondents, 2 (2.1%) with an elementary school education did not seek care at a health facility, and this group represented the minority of respondents who answered "no" to the survey item on the highest level of formal education attained. Spearman's Rho analysis showed a significant correlation ($p = 0.047$, $r = -0.205$), indicating a weak negative relationship in which the two variables did not move in the same direction. This result supports the acceptance of H1: a relationship exists between educational level and treatment-seeking decisions, although the direction of that relationship is inverse rather than unidirectional.

Table 3 Economic cross tabulation (financing)

Financing	To Facilities	Health services			
			No %	Total	
	Yes f %	f		n	%
General 0	0.0%	2	2.1%		2.1%
BPJS non-16 PBI	17.0%	0	0.0%	2 16	17.0%
BPJS PBI 76	89.9%	0	0.0% 89.9%	76	
Total 92	97.9%	2	2.1% 100.0%	94	
Spearman Rho Correlation coefficient (r): - 0.366			*Significance* (p): <0.001		

Source: Processed by the researchers (2025)

Table 3 presents the cross-tabulation between economic factors (source of financing) and the decision to seek care. Of the 94 respondents, 2 (2.1%) who relied on general (out-of-pocket) financing did not seek care at a health facility, and the majority of respondents answered "no" to the survey item on the type of health financing available to them. Spearman's Rho analysis showed a significant correlation ($p < 0.001$, $r = -0.366$), indicating a weak negative relationship in which the two variables did not move in the same direction. This result supports the acceptance of H1: a relationship exists between economic status and treatment-seeking decisions, although the direction of that relationship is inverse rather than unidirectional.

Table 4 Cross tabulation of access to health care facilities

Distance	To Facilities	Health services		
			No %	Total
	f	f	n %	
< 5KM 64	Yes %	0	0.0% 64 68.1%	
>5KM 28	68.1%	2	2.1% 30 31.9%	
Total 92	% 29.8% 97.9%	2	2.1% 94 100.0%	
Spearman Rho Correlation coefficient (r): 0.215			*Significance* (p): 0.037	

Source: Processed by the researchers (2025)

Table 4 presents the cross-tabulation between access to health care facilities and the decision to seek care. Of the 94 respondents, 2 (2.1%) living more than 5 km from a health facility decided not to seek care, and this group represented the minority of respondents who answered "no" to the survey item on distance to the nearest health center or hospital. Spearman's Rho analysis showed a significant correlation ($p = 0.037$, $r = 0.215$), indicating a weak positive relationship in which the two variables moved in the same direction. This result supports the acceptance of H1: a relationship exists between access to health facilities (distance) and treatment-seeking

decisions, with the two variables moving in the same direction.

Table 5 Cross tabulation of family support

Family support	To Health Care Facilities Yes		No	Total
	f % 0 0.0%	f	% %	n
Not enough	% 49 52.1% 43	1	1.1% 1.1%	1
Enough	45.7% 92 97.9%		1.1% 50 53.2%	
Good		1	0.0% 43 45.7%	
Total		0 2	2.1% 94 100.0%	
Spearman Rho Correlation coefficient (r) : - 0.211			*Significance* (p): 0.041	

Source: Processed by the researchers (2025)

Table 5 presents the cross-tabulation between family support and the decision to seek care. Of the 94 respondents, 1 (1.1%) from a low-income family with low family support did not seek care at a health facility, and the majority of respondents answered "sometimes" to the survey item on whether their family praised them for taking treatment seriously. Spearman's Rho analysis showed a significant correlation (p = 0.041, r = -0.211), indicating a weak negative relationship in which the two variables did not move in the same direction. This result supports the acceptance of H1: a relationship exists between family support and treatment-seeking decisions, although the direction of that relationship is inverse rather than unidirectional.

Table 6 Cross tabulation of health care system

Service system	To Facilities Health services Yes		No	Total
	f % 6 6.4%	f	% %	n
Quite satisfied	% 91.5% 97.9%	2	2.1% 8 8.5%	
Very satisfied 86		0	0.0% 86 91.5%	
Total 92		2	2.1% 94 100.0%	
Spearman Rho Correlation coefficient (r) : - 0.483			*Significance* (p): 0.001	

Source: Processed by the researchers (2025)

Table 6 presents the cross-tabulation between the health care system and the decision to seek care. Of the 94 respondents, 2 (2.1%) who rated the health service system as "quite satisfied" did not seek care at a health facility, and the majority of respondents answered "no" to the survey item on whether health workers routinely conducted non-communicable disease (NCD) screening for ACS patients. Spearman's Rho analysis showed a significant correlation (p = 0.001, r = -0.483), indicating a weak negative relationship in which the two variables did not move in the same direction. This result supports the acceptance of H1: a relationship exists between the health care system and treatment-seeking decisions, although the direction of that relationship is inverse rather than unidirectional.

DISCUSSION

Relationship Between Educational Factors and Patients' Decisions to Seek Care During an Acute Coronary Syndrome (ACS) Attack

The results show a significant relationship between educational factors and patients' decisions to seek care during an ACS attack (p = 0.047), with a weak negative correlation (r = -0.205) indicating that the two variables did not move in the same direction. This suggests that respondents with a higher level of education were somewhat less likely to answer that they would go to a health facility.

This finding is consistent with prior research showing that education level shapes primary health care utilization patterns, though not always straightforwardly: older adults with primary education, for example, have been found more likely than those without any education to use primary health care (Laksono *et al.*, 2024). One plausible explanation is that more highly educated respondents may rely more on self-

management, including symptom monitoring and preventive health behaviors such as exercise and diet, and may therefore delay facility-based care until symptoms are judged severe enough to warrant it.

The Relationship Between Economic Factors and Patients' Decisions to Seek Treatment

The results show a significant relationship between economic factors (source of financing) and patients' decisions to seek treatment during an ACS attack ($p < 0.001$), with a weak negative correlation ($r = -0.366$) indicating that the two variables did not move in the same direction. An increasing reliance on general (out-of-pocket) financing was associated with a lower likelihood of seeking care at a health facility during an ACS attack.

This finding aligns with evidence that health insurance ownership meaningfully shapes health service utilization in Indonesia, with disparities in access linked to insurance status alongside education and wealth (Wulandari *et al.*, 2022). Patients with insurance coverage may feel more protected against the financial burden of emergency treatment and therefore more willing to seek facility-based care promptly, whereas those without coverage may delay care due to cost concerns. Financial considerations, including transportation and treatment costs, disproportionately affect low-income patients, who are more likely to choose whichever service is most affordable regardless of urgency. For a condition such as ACS, the perceived severity and urgency of symptoms remains a central driver of whether individuals seek care at all (Alkhawaldeh *et al.*, 2023). Taken together, these findings indicate that the source of financing, whether government-subsidized insurance, private insurance, or out-of-pocket payment, plays a substantial role in shaping how and when patients access care under urgent conditions.

The Relationship Between Access to Health Service Facilities and Patients' Decisions to Seek Care

The results show a significant relationship between access to health care facilities and patients' decisions to seek care during an ACS attack ($p = 0.037$), with a weak positive correlation ($r = 0.215$) indicating that the two variables moved in the same direction. A shorter distance to a health facility, specifically less than 5 km, was associated with a higher likelihood of respondents deciding to seek care.

This finding is consistent with evidence that distance and local service availability shape health care utilization in Indonesia, with rural residents showing consistently lower odds of using outpatient and inpatient hospital services than urban residents, and with qualitative evidence that distance, transportation cost, and limited local service availability remain persistent barriers to care in rural areas (Wulandari *et al.*, 2022; Aji *et al.*, 2023). For ACS specifically, delayed treatment arising from limited access, given that "time is muscle" in cardiac care, can have severe and even fatal consequences. This study's findings support the conclusion that access to health care facilities plays a determining role in patients' decisions to seek care during an acute cardiac event.

Relationship of Family Support to Patients' Decisions to Seek Treatment

The results show a significant relationship between family support and patients' decisions to seek care during an ACS attack ($p = 0.041$), with a weak

negative correlation (r = -0.211) indicating that the two variables did not move in the same direction. This was reflected in respondents in the “less” family support category who nonetheless decided not to go to a health facility during an ACS attack.

Family decision-making often involves discussion among household members, and figures such as the head of the family can carry substantial influence over whether and where a patient seeks care (Dana, Chiau and Rahman, 2025). The family plays a central role in maintaining the health of its members and acts as an effective intermediary in the pursuit of care (Ayu *et al.*, 2024). Based on the results of this study, family support for the patient's decision plays an important role in determining whether the patient is taken to a health facility during an ACS attack.

The Relationship Between the Health Service System and Decision Making During Acute Coronary Syndrome (ACS) Attacks

The results show a significant relationship between the health care system and patients' decisions to seek treatment during an ACS attack (p = 0.001), with a weak negative correlation (r = -0.483) indicating that the two variables did not move in the same direction. This was reflected in some respondents who rated the health service system as "quite satisfied" nonetheless deciding not to seek care at a health facility during an ACS attack.

This finding is consistent with Andersen's Behavioral Model of health service use, in which an individual's use of services depends on perceived need and the perceived benefits and barriers associated with seeking care (Alkhawaldeh *et al.*, 2023). In this study, the perceived benefit of using a given health service appears to shape patients' willingness to use it. Quality health services remain a key benchmark of patient satisfaction and shape patients' willingness to return for future care, and the availability of adequate facilities supports this quality, underscoring the need for health facilities to remain affordable and accessible across all segments of society (Alim, Indar and Harniati, 2023).

Based on this research, a well-functioning health service system is a determinant of patients' decisions to seek treatment, particularly during an ACS attack. The health system is closely tied to patient satisfaction with the care received, and patient satisfaction in turn has a positive impact on both the facility and the patient.

This study has several limitations that should be considered when interpreting its findings. First, the sample was drawn using a purposive, non-probability sampling technique from a single region (Bondowoso Regency), which limits the generalizability of the findings to ACS patients in other geographic or health system contexts. Second, the cross-sectional design captures patients' decisions and the associated factors at a single point in time, which allows the identification of statistical associations but does not permit conclusions about causal direction between the study variables and treatment-seeking decisions. Third, although the correlations between all five factors and patients' decisions were statistically significant, the strength of these relationships was consistently weak (r values ranging from -0.483 to 0.215), indicating that each factor individually accounts for only a small proportion of the variation in patients' decisions, and that other unmeasured factors likely play a substantial role. Fourth, data were collected through a self-

administered questionnaire, which is subject to recall bias and social desirability bias, particularly for sensitive items such as financial status and satisfaction with health services. Finally, the relatively modest sample size (n = 94) limits the statistical power available to detect smaller effects and constrains more detailed subgroup analysis. Future research employing a larger, multi-site sample, a longitudinal or mixed-methods design, and validated instruments would help address these limitations and provide a more robust understanding of the factors influencing treatment-seeking decisions during an ACS attack.

CONCLUSION AND SUGGESTION

This study found a significant relationship between educational factors, economic factors (source of financing), access to health care facilities, family support, and the health care system, and patients' decisions to seek care during an Acute Coronary Syndrome (ACS) attack. Respondents with a higher level of education were less likely to seek care at a health facility, likely reflecting greater confidence in their own ability to monitor and manage their health. A similar pattern emerged for financing: respondents who relied on general (out-of-pocket) payment rather than health insurance were also less likely to seek facility-based care, indicating that the source of financing shapes treatment-seeking behavior in much the same way that education does.

Access to care, by contrast, moved in the expected direction: closer proximity to a health facility was associated with a greater likelihood that patients would decide to seek care during an ACS attack, confirming the role of physical accessibility in timely treatment-seeking. Family support and the health care system, however, echoed the pattern seen with education and financing rather than access: higher family support was associated with a lower likelihood of seeking care at a health facility, suggesting that strong family support may, in some cases, lead patients toward care and reassurance at home rather than facility-based treatment, and higher satisfaction with the health service system showed the same lower-likelihood pattern. Taken together, these findings suggest that of the five factors examined, access to facilities was the one most consistently associated with patients actually going to seek care, while the other four were each associated, in different ways, with patients choosing to manage the event without a facility visit.

Because this study examined only five variables, these findings should be read as a starting point rather than a complete account of what drives treatment-seeking during an ACS attack, and future research is encouraged to explore other factors that may play a role, in order to build a fuller picture of this behavior. Given that this study also relied on a quantitative approach, and given how counterintuitive some of the patterns above are, particularly the negative associations for family support and system satisfaction, qualitative methods in future research are especially well suited to explaining the reasoning and lived experience behind these decisions in ways that quantitative measures alone cannot capture.

REFERENCES

Abdhofar, A. (2023) “Development of a belief-based and motivational behavioral model for medication adherence in hypertensive clients,”

Surabaya.

Aji, B. *et al.* (2023) "Enablers and Barriers of Healthcare Services for Community-Dwelling Elderly in Rural Indonesia: A Qualitative Evidence Synthesis," *Portuguese Journal of Public Health*, 41(1), pp. 65–79. Available at: https://doi.org/10.1159/000530047.

Alim, M.C., Indar, I. and Harniati, H. (2023) "Faktor Faktor yang Mempengaruhi Pemanfaatan Pelayanan Kesehatan di Klinik Engsar Polewali Mandar," *Jurnal Ners*, 7(2), pp. 829–836. Available at: https://doi.org/10.31004/jn.v7i2.15096.

Alkhawaldeh, A. *et al.* (2023) "Application and Use of Andersen's Behavioral Model as Theoretical Framework: A Systematic Literature Review from 2012–2021," *Iranian Journal of Public Health* [Preprint]. Available at: https://doi.org/10.18502/ijph.v52i7.13236.

Arrebola-Moreno, M. *et al.* (2020) "Psychological and cognitive factors related to prehospital delay in acute coronary syndrome: A systematic review," *International Journal of Nursing Studies*, 108, p. 103613. Available at: https://doi.org/10.1016/j.ijnurstu.2020.103613.

Ayu, S.A. *et al.* (2024) "Peran Kemandirian Kesehatan Keluarga Terhadap Kontrol Diri pada Individu Penderita Hipertensi," *MAHESA : Malahayati Health Student Journal*, 4(3), pp. 907–927. Available at: https://doi.org/10.33024/mahesa.v4i3.13921.

Beza, L. *et al.* (2021) "Acute coronary syndrome treatment delay in low to middle-income countries: A systematic review," *IJC Heart & Vasculature*, 35, p. 100823. Available at: https://doi.org/10.1016/j.ijcha.2021.100823.

Creswell, J.W. and Creswell, J.D. (2023) *Research design: Qualitative, quantitative, and mixed methods approaches*. Sixth. SAGE Publication, Inc.

Dana, N.R., Chiau, M.L. and Rahman, A.D. (2025) "FAMILY SUPPORT, MOTIVATION, AND PATIENT ADHERENCE TO TUBERCULOSIS TREATMENT: INSIGHTS FROM INDONESIA.," *African journal of infectious diseases*, 19(2), pp. 43–49. Available at: https://doi.org/10.21010/Ajidv19i2.5.

Dewi, S., Nadapdap, T.P. and Januariana, N.E. (2022) "Pengaruh mutu pelayanan kesehatan terhadap kepuasan pasien peserta JKN/KIS di Puskesmas Gunung Tua Kecamatan Padang Bolak," *Jurnal Kesmas Prima Indonesia*, 6(2), pp. 1–9. Available at: https://doi.org/10.34012/jkpi.v6i2.2991.

Florida, A. (2024) "Analysis of factors related to family efforts to seek treatment for people with mental disorders in the Alor Regency Islands," Surabaya.

Ivynian, S.E. *et al.* (2020) "Factors influencing care-seeking delay or avoidance of heart failure management: A mixed-methods study," *International Journal of Nursing Studies*, 108, p. 103603. Available at: https://doi.org/10.1016/j.ijnurstu.2020.103603.

Khaled, M.F.I. *et al.* (2022) "Factors Responsible for Prehospital Delay in Patients with Acute Coronary Syndrome in Bangladesh," *Medicina*, 58(9), p. 1206. Available at: https://doi.org/10.3390/medicina58091206.

Laksono, A.D. *et al.* (2024) "EDUCATION'S ROLE IN PRIMARY HEALTHCARE

UTILIZATION AMONG OLDER PEOPLE IN INDONESIA," *Jurnal Administrasi Kesehatan Indonesia*, 12(1), pp. 11–24. Available at: https://doi.org/10.20473/jaki.v12i1.2024.11-24.

Martin, S.S. *et al.* (2024) "2024 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association," *Circulation*, 149(8). Available at: https://doi.org/10.1161/CIR.0000000000001209.

Sulastri, L., Trisyani, Y. and Mulyati, T. (2020) "Manfaat Health Education pada Pasien Acute Coronary Syndrome (ACS): Tinjauan Literatur," *Journal of Nursing Care*, 3(2). Available at: https://doi.org/10.24198/jnc.v3i2.24504.

Wulandari, R.D. *et al.* (2022) "Hospital utilization in Indonesia in 2018: do urban–rural disparities exist?," *BMC Health Services Research*, 22(1), p. 491. Available at: https://doi.org/10.1186/s12913-022-07896-5.

Zhang, B. *et al.* (2023) "Influencing factors for decision-making delay in seeking medical care among acute ischemic stroke patients in rural areas," *Patient Education and Counseling*, 108, p. 107614. Available at: https://doi.org/10.1016/j.pec.2022.107614.