

Improving Treatment Adherence in Older Adults with Acute Coronary Syndrome: A Policy Brief

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Acute coronary syndrome (ACS) is a leading cause of myocardial ischemia and a major contributor to global mortality. The rapidly aging population is a key driver of the ACS epidemic, and as the number of older adults increases, the burden of ACS is expected to rise accordingly. Adherence to medical advice is crucial for heart patients to prevent re-hospitalization and avoidable complications. Non-adherence to treatment recommendations can have serious consequences, including worsening health outcomes and increased risk of readmission. To mitigate these risks, healthcare providers play a vital role in addressing barriers to adherence, educating patients, and collaborating with other healthcare professionals to deliver comprehensive care. By providing targeted support, healthcare providers can empower patients to adhere to their treatment plans, leading to improved health outcomes and reduced re-hospitalization rates. With this in mind, this policy brief aims to inform health service planners in low- and middle-income countries (LMICs) who are developing national policies and strategies for cardiovascular disease care in older adults.

Introduction

The aging population is associated with an increased burden of coronary heart disease and higher mortality rates. Older adults commonly experience chronic conditions such as cardiovascular disease and type 2 diabetes (2). Low- to middle-income countries, including Iran, bear a disproportionate burden of premature deaths from non-communicable diseases, including acute coronary syndrome (ACS), accounting for over 80% of global deaths (3). In Iran, the level of treatment adherence is alarmingly low, resulting in excessive and arbitrary use of medications. In fact, Iran ranks 64th globally and second in Asia, after China, in terms of drug use (4). Non-adherence to treatment not only increases healthcare costs but also elevates the risk of cardiovascular complications and mortality. Given the growing global ACS population, its significant clinical impacts, and associated expenses, addressing this non-adherence issue is crucial (5). The complex issue of medication non-adherence is influenced by various factors, including healthcare system-related, patient-specific, socioeconomic, psychosocial, and medication-related factors (6-8). However, there is a knowledge gap in understanding the socio-cultural-economic conditions that affect medication adherence in older adult cardiovascular patients in western Iran. To bridge this gap, this study aimed to identify the barriers to treatment adherence in this population, with the goal of providing valuable insights for policymakers and healthcare stakeholders.

The study

In our study, we conducted a qualitative content analysis to explore the experiences of barriers to treatment adherence among older adults ($n = 38$) in Kermanshah, Iran in 2023. We employed a purposive sampling method to select participants, excluding individuals under the age of 60, those with a history of cognitive disorders such as Alzheimer's disease, and older adults residing in nursing homes. Additionally, three patients who fully adhered to their treatment were not fully

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interviewed and were therefore excluded from the study. Data collection was conducted through in-depth interviews and semi-structured methods until data saturation was achieved. At the beginning of each interview, the purpose of the study was explained to the participants, and they were assured of the confidentiality and anonymity of the information obtained. After clarifying and explaining the concept of "adherence to treatment," the primary question guiding the interview was: What are the obstacles that prevent you from taking heart medications as prescribed by your doctor? Each interview lasted between 30 and 45 minutes, and if necessary, were conducted in two stages to ensure that all relevant information was captured. To ensure the validity and reliability of the data, we employed the four main criteria of credibility, dependability, confirmability, and transferability, as proposed by Lincoln and Guba (9). For data analysis, we employed the 6-step content analysis method developed by Graneheim and Lundman (10). Initially, we immersed ourselves in the data, repeatedly reading and re-reading the interview transcripts to allow initial ideas to emerge. Next, we formed initial codes and concepts in the second stage. In the third stage, we identified categories and subcategories, and in the fourth stage, we established relationships between them. Subsequently, we named the categories and subcategories in the fifth stage, and finally, we reported the results of the research. Notably, data collection and analysis were conducted concurrently, allowing for iterative refinement of the coding framework and data collection process.

The findings

Adherence to treatment is a complex and multifaceted phenomenon. Based on the assigned codes, the present study revealed three main themes. These themes include: 1-Poor performance of the treatment team, which encompasses (Lack of empathy between the doctor and the patient, Inappropriate perception of the patient about their disease, Inadequate healthcare services for older adults, Difficulty accessing medication, Treatment misconceptions). 2-Financial constraints, which include (High medical expenses, Poor financial situation). 3-Despair and social rejection, which encompass (Lack of meaning and hope in life, wish to die, Adverse drug side effects and prolonged treatment process, Lack of motivation, Proximity to death).

Recommendations for Health Policymakers

1- Enhancing the Performance of healthcare providers

- Provide education for healthcare providers and caregivers on effective communication and adherence strategies and Establish multidisciplinary teams to provide comprehensive care and support.
- Establish think tanks or idea centers within medical facilities to identify barriers to treatment adherence among older adults and develop solutions.
- Develop comprehensive, continuous educational and awareness programs for the general public to increase health literacy and promote healthy behaviors
- Education a culture of respect for expertise and trust in doctors to prevent arbitrary prescription of medications by non-specialists.
- Provide personalized medication management and education to address polypharmacy and complex regimens.
- Increase the number of older adult-friendly pharmacies nationwide, taking into account the physical and mental conditions of older adults. This should include strengthening the family doctor program and improving access to medicine and medical equipment, particularly in rural and underprivileged areas.
- Use simple, clear language when communicating treatment plans to older adults and their caregivers to ensure understanding of treatment plans.
- Develop and disseminate evidence-based guidelines for treatment adherence in older adults with ACS.

2- Addressing Financial Constraints

- Expand insurance coverage for older adults to ensure they have access to necessary medical care.
- Offer special medical discounts for older adults in both public and private healthcare facilities.
- Encourage the use of technology, such as mobile apps and telehealth, to support remote monitoring and adherence.

3- Addressing despair and social rejection

- Encourage social participation of older adults in community activities, tailored to their abilities and interests.
- Create accessible and inclusive recreational spaces that cater to the physical needs of older adults, facilitating group activities such as sports, mental games, and reminiscing sessions.
- Provide emotional support and encouragement to older adults with ACS to adhere to treatment plans with the help of psychological experts.

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Recommendation for adherence to treatment

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Further reading

1. Al-Azayzih A, Kanaan RJ, Altawalbeh SM, Al-Qerem W, Smadi S. Medication Adherence and Its Associated Determinants in Older Adults with Type 2 Diabetes and Cardiovascular Comorbidities. Patient preference and adherence. 2023 Dec 31:3107-18.

This paper indicates an inadequate level of adherence among patients with type 2 diabetes and cardiovascular comorbidities. This study revealed the necessity of implementing programs to help in raising the awareness among old adult patients with type 2 diabetes and CVDs of the importance of adherence to prescribed long-term medication regimens.

2. Baryakova TH, Pogostin BH, Langer R, McHugh KJ. Overcoming barriers to patient adherence: the case for developing innovative drug delivery systems. Nature Reviews Drug Discovery. 2023 May;22(5):387-409. **This paper emphasizes that formulating a pharmaceutical in a drug delivery system (DDS) is a promising alternative that can directly mitigate many common impediments to adherence, including frequent dosing, adverse effects and a delayed onset of action.**

3. Kalantarzadeh M, Yousefi H, Alavi M, Maghsoudi J. Adherence barriers to treatment of patients with cardiovascular diseases: a qualitative study. Iranian journal of nursing and midwifery research. 2022 Jul 1;27(4):317-24.

This paper indicates a Qualitative Study, Adherence Barriers to Treatment of Patients with Cardiovascular Diseases. The findings of the present study can provide a framework for healthcare professionals to employ preventive strategies, reduce disease complications, decrease unhealthy behaviours, and increase prolonged adherence to treatment recommendations in patients with CVD.

4. Aremu TO, Oluwole OE, Adeyinka KO, Schommer JC. Medication Adherence and Compliance: Recipe for Improving Patient Outcomes. Pharmacy (Basel). 2022 Aug 28;10(5):106. **This paper offers recommendations to improve adherence to treatment protocols. Improving providers' and patients' education and adopting active and passive communication, including consented reminders, could enhance compliance. Embracing partnerships between providers' organizations and faith-based and community organizations could drive adherence. Adopting an income-based cap on out-of-pocket spending and adapting the physical properties, bioavailability, and dosage regimen of medications to accommodate diverse patient population preferences could encourage refills and compliance.**

5. Kolandaivelu K, Leiden BB, O'Gara PT, Bhatt DL. Non-adherence to cardiovascular medications. European heart journal. 2014 Dec 7;35(46):3267-76. **This paper explains a Non-adherence to cardiovascular medications. Base on findin this study, clinical and cost-benefits of adherence, addressing non-adherence to prescribed therapies is a top priority.**

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Competing interests

The authors declare that they have no conflict of interest.

Ethics approval

Ethical approval was obtained and approved for the study from the Ethics Committee at the Kermanshah University of Medical Sciences. The ethic code allocated to this study is IR.KUMS.REC.1402.598.