

# Healthcare Challenges for the Elderly in Makkah, Saudi Arabia

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## Abstract

During the Hajj and Umrah, Makkah, a major destination for religious tourists worldwide, faces previously unheard of healthcare demands. Due to overpopulation, inadequate infrastructure, and resource prioritizing for pilgrims, the older population—who are already at risk due to chronic conditions like diabetes and hypertension—faces additional difficulties. to assess the particular healthcare obstacles older Makkah residents face during pilgrimage seasons and suggest ways to make access better. The study used a qualitative methodology to interview older adults (65+) who were managing chronic illnesses in semi-structured interviews. To find obstacles and answers, data were subjected to theme analysis. Key themes were included restricted access to healthcare, prescription shortages, interrupted chronic disease management, and mobility issues made worse by congestion were among the major topics. Telemedicine, priority healthcare lanes, and provider geriatric training were among the recommendations. Previous studies have mostly focused on pilgrims, ignoring the systemic healthcare issues faced by older residents. This study emphasizes the critical necessity for equitable, context-specific healthcare measures to assist senior citizens during periods of high pilgrimage.

## Keywords

*Chronic conditions, Hypertension, Healthcare obstacles, Access to healthcare, Healthcare accessibility*

## Introduction

Makkah is the holy city of Islam. It is a centre of global tourism in the religious domain, holding immense prominence in the Saudi Arabian healthcare landscape. Pilgrims in millions from all over the world come to perform Hajj and Umrah every year, which makes a seasonal hike in the population of the city (Basheikh et al., 2021). This brings noticeable logistical and healthcare hurdles, specifically for those living permanently. Among them, the elderly population deals with compounded problems in accessing healthcare, particularly when pilgrimage seasons arrive, eventually resources are limited (Alkabba et al., 2012). Chronic conditions management, like management of diabetes, hypertension, and arthritis gets drastically tough which exposes a susceptible population to greater risks to health (Hamsa et al., 2024).

Over 2.5 million people from all over the world travel to Makkah and the holy sites of Saudi Arabia each year to perform the Hajj. Although the pilgrims come from a variety of backgrounds, the majority are middle-aged or older and frequently come from low-income nations. Given the

difficulties they encounter—such as extreme heat, lengthy walks, and handling temperature-sensitive medications—this has important public health ramifications. The pilgrims also have to deal with health risks and comorbidities (Ahmed et al., 2006). Significant comorbidities among Hajj pilgrims are cardiovascular disease-related illnesses (such as diabetes mellitus and hypertension), especially among those aged 65 to 75. Of these, 31% have diabetes, 27.5% have hypertension, and 11.4% have hypercholesterolemia (Gautret et al., 2009).

Furthermore, a significant percentage of Hajj participants are older than 60. The number of people with chronic illnesses during the Hajj may be far higher than projections due to the higher incidence of chronic diseases in the elderly (Siavash & Haghighi, 2012). It is estimated that over 300,000 Muslims with chronic illnesses may perform the Hajj annually due to the high prevalence of diabetes mellitus, hypertension, and cardiovascular diseases (ranging between 8.5% and 40% in this age group) worldwide and the number of Muslims who perform the Hajj (roughly 2.5 million adults). However, given that the frequency of chronic diseases is higher in Arab and Muslim nations than in non-Muslim nations, this may be an underestimate (Abajobir, 2017).

The Saudi Arabian healthcare system has achieved a significant triumph in recent times, featuring developments in infrastructure and technology-driven solutions adoption such as telemedicine (Fadel Alqublan, 2021). Despite such advancements, the unique needs of Makkah during the time of pilgrimage seasons exhibit a complex situation, like the sudden arrival of millions of pilgrims leads to hospitals full of crowds of patients, expanded times of waiting, and the medical resources reallocation for addressing acute care requirements for foreigners (Al Ruwaithi, 2021). This generally causes residents to be undertreated by the elderly, which is a concern accompanied by their reliance on sustained medical attention for managing chronic disorders. The association between global religious tourism and local access to healthcare in Makkah is hence a crucial domain of focus, requiring a focused inquiry (Almehmadi, 2023).

The challenges that the elderly people face in Makkah are multidimensional. Pilgrimage seasons and significant contemporary obstacles access to healthcare, which includes constrained specialist availability, deficiency of medications, and logistical issues in approaching facilities of healthcare (Roszak & Huzarek, 2022). Additionally, the priority of care of pilgrims in the Hajj and Umrah period usually sidelines the requirements of locals. For elderly people, who generally need consultations daily, refills of medication, and monitoring for chronic diseases, such abnormalities can produce severe results (Han & Ding, 2024).

Current literature underscores the burden on the infrastructure of healthcare during the seasons of pilgrimage, but not many researchers have figured out the particular experiences and hurdles of the elderly population of Makkah (Althaiban et al., 2023). Addressing this disparity is essential to creating strategies that guarantee equitable access to healthcare for all.

The seasons of pilgrimage underscore the burden on systems of healthcare as well as expose weaknesses of the system affecting the elderly disproportionately. Such weaknesses extend from a decreased approach to primary care and services of specialists to the deficiency of important medications (Almehmadi & Alqahtani, 2023). For instance, research has demonstrated that the facilities of healthcare during Hajj usually operate at complete potential, which leaves not a big room to cater non-emergency care for locals (Albeshr et al., 2023). Consequently, elderly people generally report delays in getting care, interruptions in their regimens of treatment, and hindrances in making schedules for follow-ups for chronic disorder management. These hurdles highlight the demand for a deeper comprehension of how such systemic problems influence them and what

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should be the ultimate solution for mitigating them (Qahtani et al., 2023). This research aimed at evaluating the experiences of elderly residents of Makkah in accessing healthcare and managing chronic disorders during the seasons of pilgrimage. By concentrating on their viewpoints, the research seeks to identify the significant hurdles they experience, also the approach that might enhance their reach to essential services. It resolves a crucial research gap too. As there is enough research on healthcare hurdles during Hajj and Umrah, most researches focus on pilgrims, not locals, leaving a gap in comprehending how such times of high demand impact the elderly people.

## **Theoretical framework**

The Healthcare Access Framework by (Aday & Andersen, 1974) offers a significant theoretical framework for comprehending such problems. This structure inquires in what manner individual properties, attributes of the healthcare system, and wide contextual factors associated to impact care access. Implementing this structure in the light of elderly residents of Makkah in the seasons of pilgrimage can aid in exploring the particular hindrances they experience. In the same way, the Chronic Disease Management Framework offers a valuable stance on how systemic hurdles in peak times resist impactful chronic disease management, further alleviating health disruptions (Quaium et al., 2023). This research not only looks to fill a crucial research gap but also proposes solutions for enhancing the services of healthcare for the elderly people of Makkah. By highlighting the experiences and challenges they face, it gives a base for forming targeted interventions ensuring a fair approach to healthcare, even in the most demanding seasons of pilgrimage. Consequently, it contributes to a wider comprehension of how global phenomena such as religious tourism interacts with the needs of local healthcare, specifically for the populations at risk.

## **Literature Review**

### ***Healthcare Challenges for the Elderly in Saudi Arabia***

Elderly people in Saudi Arabia deal with notable hindrances to accessing the services of healthcare, specifically in centers in cities such as Makkah. Hurdles are constrained presence and affordability of medical care and the problems related to navigating geographic obstacles (Alkhamis & Miraj, 2021). Chronic disorders, which include diabetes, hypertension, and arthritis, are common in this group of people and need consistent medical care. However, systems of healthcare generally struggle to resolve efficiently to the developing elderly individuals. Although Makkah gets advantages from healthcare extensions because of its contribution as a pilgrimage centre, its concentration on a temporary framework for pilgrims generally overlooks the requirements of local elderly people (Qahtani et al., 2023). Despite enhancements in the infrastructure of healthcare, accessibility problems are still there. The elderly usually face problems in achieving specialized care because of resource constraints and systems that are overburdened (Walston et al., 2008). Such gaps underscore the dying demand for a system of healthcare tailored according to elderly residents.

### ***Impact of Religious Tourism on Healthcare Systems***

The novel highlights religious tourism in the seasons of Hajj and Umrah noticeably strains the healthcare system of Makkah. The millions of pilgrims create logistical hurdles, which include

long waiting times, overcrowding, and a hike in emergency cases (Choe, 2024). Temporary facilities structured for accommodating pilgrims generally occur at maximum potential, which leaves behind residents, particularly the elderly ones having a decreased approach to significant services of healthcare (Charan et al., 2024). Elderly persons who manage chronic diseases experience pronounced hurdles in times of pilgrimage, as interruptions in the supply of medication, appointments of follow-up, and daily care obstruct their potential to sustain regular regimens of health (Olkiewicz, 2016). Additionally, healthcare facilities that have overcrowded scenarios alleviate issues of mobility and navigation for elderly individuals, which contributes to delayed cures (Ehrlich et al., 2023).

### ***Healthcare Access for Vulnerable Populations***

Elderly populations generally face hindrances in approaching services of healthcare worldwide in mass gatherings or situations of emergency. In Makkah, the religious tourism convergence and healthcare restrictions exacerbate such obstacles. Overcrowding constrained medical staff, and limited resources in the seasons of Hajj and Umrah further exacerbate such challenges for elderly people asking for care (Al-Sheddi et al., 2023). Researchers insist on the deficiency of structured solutions like priority healthcare access lanes, mobile clinics, and services of telemedicine, which are successfully applied in other areas. Such tactics are underused in the healthcare system of Makkah, which leaves elderly individuals specifically susceptible in peak seasons (Al-Shareef et al., 2017). In terms of age, social class, and ethnicity, pilgrims come from a wide range of backgrounds. But before they can afford the trip, most pilgrims will be middle-aged or older. Nearly 200,000 pilgrims from low-income nations travel there each year, and many of them have received little to no pre-Hajj medical care, which has significant public health ramifications. (Yezli et al., 2022). Catering to such gaps needs targeted policies and infrastructure enhancements to ensure an equitable approach to healthcare for elderly individuals in pilgrimage seasons.

## **Material and Methods**

### ***Study Design***

The qualitative design of the research is utilized to gain an in-depth comprehension of the experiences of elderly people in Makkah regarding accessibility to healthcare and management of chronic disorders in the seasons of Pilgrimage. A qualitative strategy was supposed to be suitable to explore personal points of view, hurdles, and suggestions in the context of seasonal healthcare strain resulting from Hajj and Umrah. The study was conducted over a six-month period of 2024, providing adequate time to gather comprehensive insights through interviews.

## **Data Collection Process**

### ***Semi-Structured Interviews***

Interviews of in-depth and semi-structured form were carried out with participants to explore their experiences with healthcare in the seasons of pilgrimage. Significant themes consisted of accessibility to healthcare, concentrating on face-offs with facilities and times of waiting, and chronic disorder management, inquiring tactics for achieving medications and sustaining care. The influence of Hajj and Umrah was underscored, specifically the burden on access to up-to-date healthcare and quality of service because of the influx of pilgrims. Participants also recognized hindrances to care, like overcrowding and shortages of staff, and offered recommendations to

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enhance access to healthcare and chronic disorder management in peak seasons. These apprehensions provided a thorough comprehension of the challenges faced by elderly people in Makkah.

### ***Interview Protocol***

A semi-structured guide to interview was created to ensure consistency while allowing insights that were participant-driven. Open-ended queries catered to the important themes structured before and prompts of follow-up were utilized to encourage detailed responses.

### **Sampling Strategy**

Participants were deployed utilizing a convenience design of sampling, having initial participants recognized from local facilities of healthcare, community centers, and organizations of elderly care in Makkah based on inclusion criteria. To be eligible, participants were supposed to be of 65 or more, year-round Makkah residents, and diagnosed with a minimum of one chronic disease, like diabetes or hypertension. Moreover, they were asked to deal with services of local healthcare in the seasons of Hajj and Umrah.

### **Data Analysis**

The data gathered from the semi structured interviews were assessed by thematic analysis to identify repetitive patterns, themes, and experiences linked to the accessibility of healthcare, chronic disorder management, and pilgrimage-associated hurdles. This strategy assisted in disclosing essential themes like barriers to access to healthcare (e.g., overcrowding, long waiting times, and resource deficits), adjustments created by the elderly in regulating chronic diseases, and the particular influence of the influx of pilgrims on the services of healthcare. The thematic analysis underwent different steps: first of all, the data familiarization was done by reading and reading the transcripts of the interview again; secondly, primary coding was executed by underscoring noticeable responses and classifying them into preliminary themes. After this, associated codes were classified into wider themes, that were reviewed and improved for making sure they precisely represented the data. Consequently, the finalization of themes and the findings were recorded and associated back to the research questions, offering a thorough comprehension of the hurdles experienced by elderly individuals in Makkah.

### **Results**

Table 1 Theme Generation

<b>Themes</b>	<b>Keywords</b>
<b>Accessibility to Healthcare Services</b>	limited availability, long waiting times, transportation barriers, physical distance, geriatric specialists, healthcare neglect
<b>Chronic Disease Management</b>	medication access, treatment interruptions, chronic conditions, follow-up appointments, healthcare anxiety
<b>Impact of Overcrowding</b>	waiting room congestion, neglect, emotional distress, mobility issues, quality of care
<b>Logistical Challenges</b>	transportation difficulties, resource allocation, communication barriers, healthcare facility strain, congestion

<b>Solutions and Recommendations</b>	priority access lanes, telemedicine, healthcare provider training, resource sharing, community collaboration
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The qualitative study was aimed at exploring the challenges of healthcare experienced by elderly people of Makkah in the seasons of Hajj and Umrah. The structured interview analysis disclosed different important aspects encapsulating the experiences and obstacles faced by this susceptible group of people. The themes recognized consist of **Accessibility to Healthcare Services, Chronic Disease Management, Impact of Overcrowding, Logistical Challenges, and Recommendations for Improvement**. Each of the themes is elaborated thoroughly below, backed by the interviewee's responses (Table 1).

#### ***Accessibility to Healthcare Services***

The accessibility theme came out as a notable obstacle for elderly individuals in Makkah. Several participants were frustrated about their potential to approach services of healthcare in the peak seasons of pilgrimage. One interviewee said, *"During Hajj, it feels like the hospitals are only for pilgrims. We locals are often left waiting for hours"*. This emotion was described by several participants, who underscored the restricted presence of specialists and the times of long waiting for appointments. The pilgrims influx not only disturbed the system of healthcare but also moved the concentration of healthcare providers to the immediate demands of the visitors, generally avoiding the current requirements of healthcare for local people, specifically the elderly.

Additionally, participants stated that the physical distance to facilities of healthcare converted into an obstacle, particularly for those having mobility concerns. One elderly participant said, *"I have to rely on my children to take me to the clinic, but during Hajj, they are busy with their commitments"*. This transportation dependence on family members further made an approach to essential medical care complicated, specifically when the options of public transport were constrained or where big crowds.

Additionally, the elderly people underscored the inappropriate nature of facilities of healthcare to resolve their particular demands. Several expressed issues regarding the deficiency of geriatric specialists and the age-friendly services of healthcare absence. One participant stated, *"The doctors are good, but they don't always understand the unique needs of older patients like me"*. This gap in comprehension can result in misdiagnosis or improper treatment, further alleviating health concerns in the elderly.

#### ***Chronic Disease Management***

Management of chronic disorders was another crucial theme that came out from the interviews. The elderly people in Makkah generally face chronic conditions like diabetes, hypertension, and arthritis, which need sustained medical attention and refills of medication. One participant said, *"I need my medications regularly, but during Hajj, I struggle to find my prescriptions filled on time"*. This disturbance in access to medication can result in severe complications of health, as many elderly participants depend on a strict regimen for effectively managing their conditions.

The interviews disclosed that the elderly generally experienced disruptions in their plans of treatment because of the lack of medications at local pharmacies, and being overwhelmed by the requirements of pilgrims. One interviewee described, *"The pharmacies run out of stock quickly because they prioritize tourists who need immediate care"*. This condition not only alleviates

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health concerns but also enhances anxiety in elderly participants who are already susceptible because of their age and status of health.

Moreover, participants stated hindrances in scheduling normal appointments of follow-up having providers of healthcare. One elderly woman said, *"I used to see my doctor every month, but now it's hard to get an appointment. They are all booked with pilgrims"*. This deficiency of continuity in care can result in making health conditions worse, as chronic disorders need existing management and monitoring.

### ***Impact of Overcrowding***

Overcrowding in facilities of healthcare in the seasons of pilgrimage was a sustained concern that noticeably affected the access to care for the elderly. Several participants explained their experiences in waiting rooms being crowded, where they experienced neglect and avoidance. One elderly woman said, *"I waited for hours just to see a doctor, and by the time I got in, I felt too weak to explain my problems"*. This overcrowding not only causes longer times of waiting but also impacts the care quality offered, as healthcare professionals are generally rushed and not able to offer proper attention to every patient.

The stress of navigating crowded atmospheres also presented hurdles for elderly individuals having mobility concerns. One participant said, *"It's hard for me to stand for long periods, and the crowds make it even more difficult to move around"*. This physical strain has the potential to deter elderly people from attaining required medical attention, resulting in untreated conditions of health.

Additionally, the emotional aspect of overcrowding can not be avoided. Many elderly individuals shared feelings of anxiety and frustration when experiencing long times of waiting and chaotic atmospheres. One interviewee said, *"I feel like I'm just another number in the system. It's disheartening"*. This emotional disturbance can further affect their overall well-being, creating a vicious cycle of outcomes of poor health.

### ***Logistical Challenges***

Logistical hurdles were generally highlighted by participants as notable obstacles to accessing healthcare. The pilgrim's influx in Hajj creates a new set of logistical concerns, which includes transportation hindrances and medical resources reallocation. One interviewee stated, *"The roads are congested, and it takes much longer to reach the hospital during Hajj"*. The maximized traffic and constrained options for parking further make access to facilities of healthcare complicated for elderly individuals.

Moreover, the temporary facilities of healthcare set up for pilgrims generally deficit the significant resources for catering to the local people. One participant said, *"The temporary clinics are not equipped to handle our ongoing health needs. They only focus on immediate care for the pilgrims"*. This deficiency of continuity in care can cause elderly individuals who feel abandoned and unsupported in crucial times.

Additionally, the communication obstacles presented by the international pilgrims can make interactions complicated between providers of healthcare and elderly participants. One elderly man said, *"Sometimes, I have trouble understanding the doctors because they are not familiar with my*

*language or my health issues*". This communication gap can result in misconceptions and inappropriate care, further alleviating health hurdles for the elderly.

### ***Solutions and Recommendations***

The final theme emerging from the interviews was the recommendations of participants for enhancing access to healthcare for the elderly in the seasons of pilgrimage. Several interviewees recommended applying lanes of priority access for local individuals, which would assist in alleviating congestion in facilities of healthcare. One participant described, *"There should be a separate line for us locals so we can get the care we need without waiting behind hundreds of pilgrims"*.

Furthermore, the utilization of telemedicine was underscored as a possible solution to link the gap in access to healthcare. Different respondents expressed their interest in virtual consultations, saying that it would let them get medical advice without the need to navigate crowded facilities. One elderly man said, *"If I could talk to my doctor online, it would save me so much trouble during these busy times"*. Applying these technological solutions might noticeably improve the healthcare services accessibility for elderly individuals in Makkah.

Moreover, participants insisted on the demand for maximized awareness and training in healthcare providers about the specific requirements of elderly participants. One interviewee recommended, *"Doctors should receive training on geriatric care so they can better understand our issues"*. This training might result in enhanced interactions with patients and better outcomes of health for elderly people.

Consequently, participants asked for better cooperation between local facilities of healthcare and those made for pilgrims. One elderly woman said, *"If the hospitals could share resources and information, it would help everyone"*. This coordinative tactic could make sure that both residents and pilgrims get the care they require without compromising the quality of the service.

### **Discussion**

These research findings disclosed crucial apprehensions about the multidisciplinary hurdles experienced by the elderly individuals of Makkah in the seasons of pilgrimage, insisting their unique susceptibilities in a system of healthcare being overburdened. Key barriers recognized consisted of a constrained approach to facilities of healthcare, interruptions in chronic disorder management, and elevated barriers of logistics, all alleviated by the millions of pilgrims influx. Such hurdles disproportionately impacted the elderly, specifically because of their dependence on sustained medical attention and specific care. Moreover, the research highlighted the inadequacy of the current infrastructure of healthcare for addressing the desired requirements of this specific group of people, like geriatric care and support of mobility. By throwing light on such gaps, the study underscored the urgent requirement for targeted interventions to ensure an equitable approach to services of healthcare for the elderly, also in the most resource-intensive periods of pilgrimage.

This research underscores the constrained approach to the services of healthcare for the elderly people in the seasons of Hajj and Umrah because of facilities being crowded and the allocation of resources that prioritize pilgrims, this is consistent with the previous research. For example, (Karthika et al., 2022) stated in a similar manner that peak periods of pilgrimage alleviate issues of accessibility for susceptible populations, specifically because of constrained staff and inappropriate infrastructure. However, our findings insist on the unique experiences that the



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elderly had, which include mobility-associated obstacles and a deficiency of geriatric-concentrated care, areas that prior research such (Hamsa et al., 2024) have superficially catered.

Previous research, like the ones by (Feda et al., 2022), has recorded interruptions in chronic disorder management for locals in mass gatherings, backing our findings of shortages of medications and disrupted appointments of follow-up. However, this research adds depth by explaining how such interruptions disproportionately affect the elderly, who need sustained care for conditions such as diabetes and hypertension. Unlike (Althaiban et al., 2023), which extensively discusses elderly malnutrition, this study recognizes access to medication and continuity of care as more immediate issues in the peak seasons.

Overcrowding in the facilities of healthcare has been a repetitive theme in research on healthcare in Hajj, with (Nasir, 2017) underscoring its detrimental effect on the care quality of patients. This research constructs such results by describing the psychological and physical impact on the elderly, which include anxiety from long times of wait and hindrances to navigating congested atmospheres. Moreover, logistical concerns such as transportation hurdles, as stated by (Al Ruwaithi, 2021), are described here, but this research uniquely links such hurdles to the dependence of elderly people on family for the sake of mobility, compounding barriers to access. Prior studies have suggested interventions like telemedicine and mobile clinics to alleviate the disruption of the systems of healthcare in mass gatherings (Al Ruwaithi, 2021). While this research aligns with such recommendations, it highlights the significance of culturally and contextually aligned solutions too, like making priority lanes of healthcare and enhancing geriatric training for the providers of healthcare. Such targeted initiatives cater to the specific requirements of the elderly population of Makkah, linking gaps left by earlier research focusing more greatly on infrastructural enhancements.

This study moves the comprehension of how religious tourism cross-links with local healthcare requirements by particularly concentrating on the elderly population in Makkah. Unlike usual evaluations of the systems of healthcare during Hajj, like (Alahmari et al., 2022) this research discusses the compounded susceptibilities experienced by elderly individuals in Makkah and provides granular suggestions for minimizing such hurdles. By applying frameworks such as the Healthcare Access Framework of Aday and Andersen, the research incorporates theoretical explanations with practical observations, making the way for more inclusive strategies for healthcare in the seasons of pilgrimage (Aday & Andersen, 1974).

## **Conclusion**

This research study brings out the cumulative health-related problems of the elderly population living in Makkah when there is a surge in pilgrimage seasons, with congested buildings, logistical problems, and inadequate geriatric care. The main findings include interrupted chronic disease management, medication shortage, and a lack of access to critical services as a result of the pilgrimage surge. All these systemic gaps were to be overcome by targeted interventions like telemedicine, priority access, and better health training for elderly care. These would have given access to health services amongst the elderly residents, achieving a balance between competing interests of international religious tourism against the critical needs of local vulnerable residents of Makkah.

## Limitation

- The participant recruitment process faces the challenges of mobility and health issues.
- It cannot be generalized to other regions due to its specific focus on healthcare challenges during the seasons of pilgrimage in Makkah.
- There is a tendency of response bias from the participants in their answers, influenced by personal experiences and perceptions narrated during interviews.

## Strengths

- Offers in-depth qualitative findings into the distinct health problems that elderly pilgrims may face during the Hajj and Umrah seasons.
- Points out systemic problems that affect the healthcare system, enabling one to understand sharply how this impacts the vulnerable.
- Aim to give context-specific suggestions such as telemedicine and priority access lanes to better alleviate the identified gaps.

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## Conflict of interest

The authors declare no conflict of interest related to this study.

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