

# Access to Headache Treatment in Mongolia: Barriers, Challenges, and the Path Forward

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## Introduction

Headache disorders remain underrecognized in LMICs, where access to specialized care and effective treatment is limited. Mongolia presents a unique case due to its vast geography, rural population, and limited headache care infrastructure. This study provides the first nationwide assessment of Mongolia's headache care, addressing patient burden, medication access, provider preparedness, and systemic barriers.

## Methods

As part of the International Headache Society (IHS) and MENAA Headache Group initiative, a cross-sectional survey using a modified HARDSHIP questionnaire was completed by 377 healthcare providers across 32 regions in Mongolia. Data on patient demographics, medication access and affordability, provider training, and regional care disparities were analyzed using descriptive and comparative statistics.

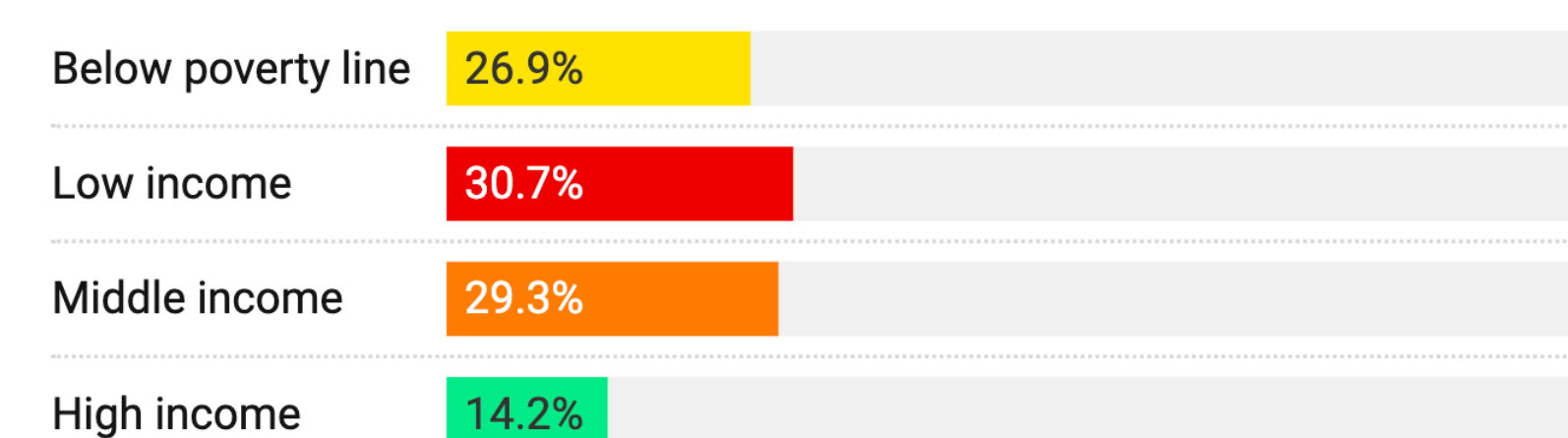
## Results

- Participant Profile:**  
A total of 377 healthcare providers participated; 66.2% were hospital-based, 20.0% worked in primary care, and 12.8% in pharmacies. Among the 377 healthcare providers 12.2% were neurologists, 15.4% family physicians, and 19.9% other physicians, while 23.6% were nurses, 6.6% clinical officers, 17.2% pharmacists, 2.7% community health workers, and 2.4% midwives.
- Patient Socioeconomic Status:**  
Among headache patients, 26.9% lived below the poverty line, 30.7% were low-income, and 29.3% were middle-income. Only 14.2% had income exceeding essential needs.
- Patient Educational Attainment:**  
20.6% of patients had not completed high school, 32.6% were high school graduates, 23.4% held a college degree, and 24.5% had postgraduate education.
- Gender and Age Distribution:**  
Women comprised 63.0 ± 10.7% and men 37.0 ± 10.8% of patients. Most were aged ≥25 years (57.1%), followed by 18–25 years (16.5%). Pediatric cases (ages 0–11) were less frequent (9.2%).
- Medication Access and Affordability:**  
While 67.3% of patients received medication with insurance discounts, 32.7% reported financial barriers. Only 55.0 ± 26.4% could afford medication, leaving 45.0 ± 24.4% with limited access.
- Regional Disparities:**  
Participant distribution was highest in Ulaanbaatar (n=94), followed by Selenge (33), Uvs (29), and Bayan-Ulgii (21). Urban areas had greater access to specialists, while rural regions relied on family physicians, nurses, and community health workers.

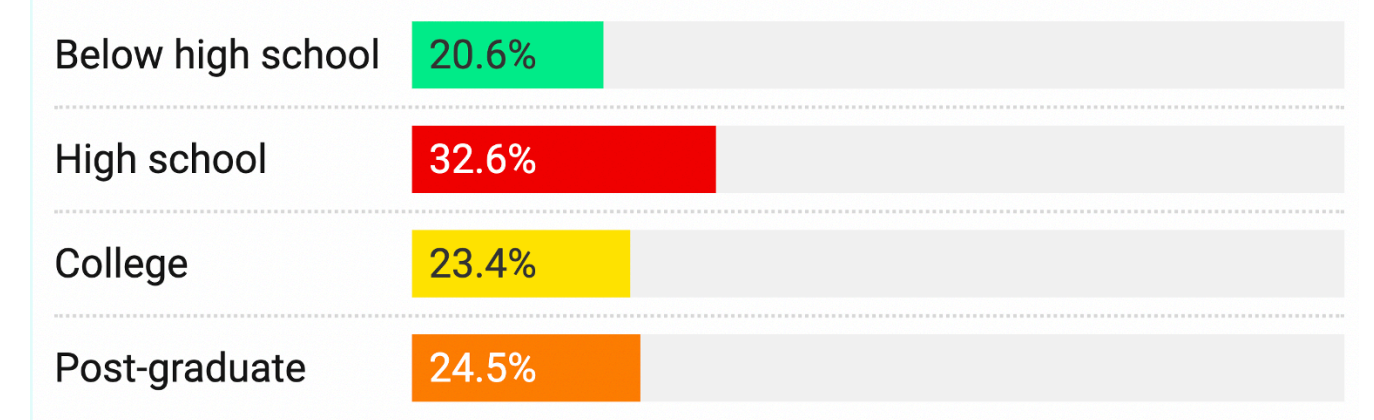


**Figure 1.** This map shows the regional distribution of healthcare providers who participated in the headache care survey in Mongolia. Marker size reflects the number of respondents, with highest participation in Ulaanbaatar (n=94), Selenge (n=33), and Uvs (n=29). The data highlight urban–rural disparities in provider representation, emphasizing the need for targeted resource allocation and improved headache care in underserved areas.

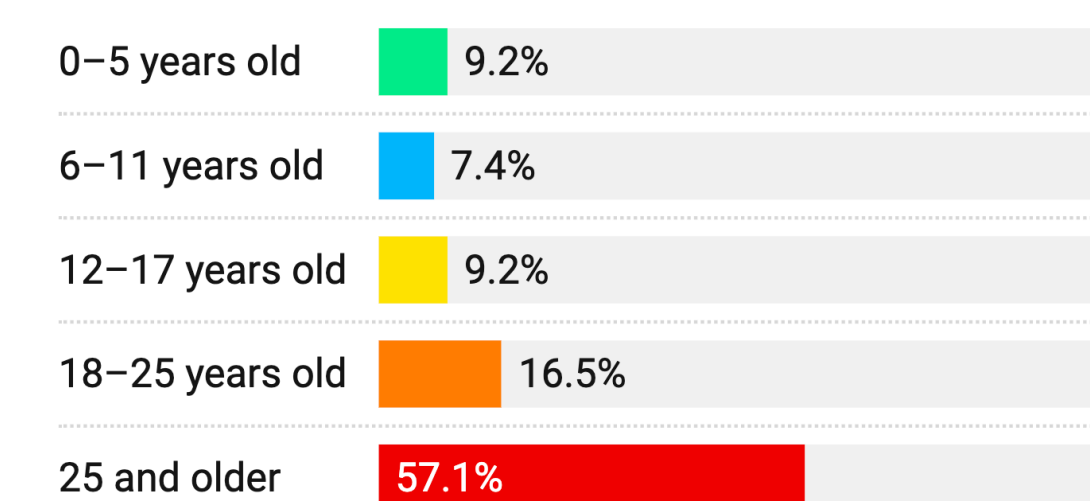
## The estimated economic level of patients



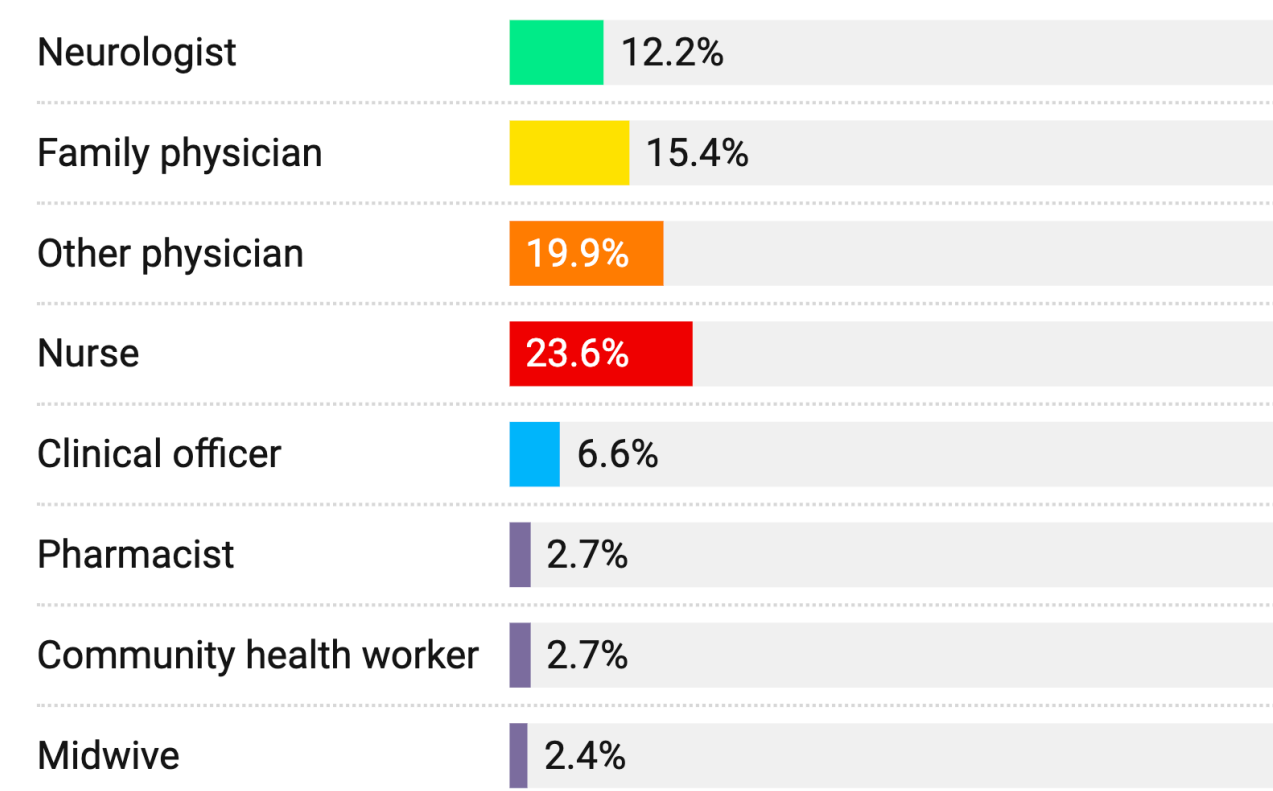
## Educational distribution of patients



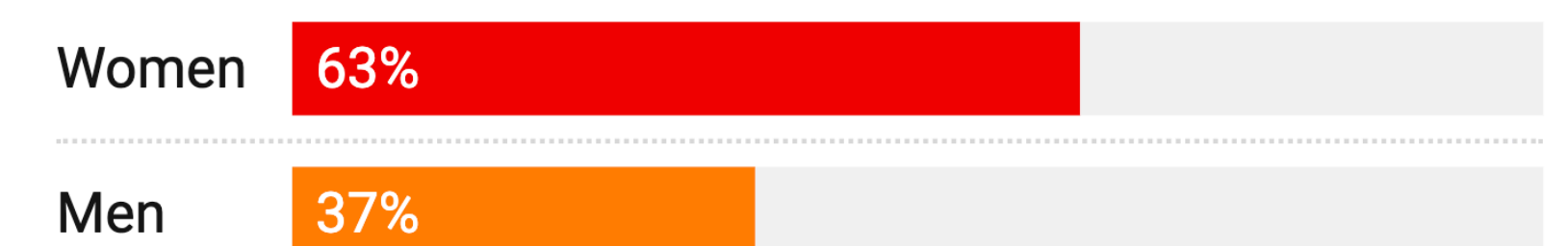
## Estimated percentage by age



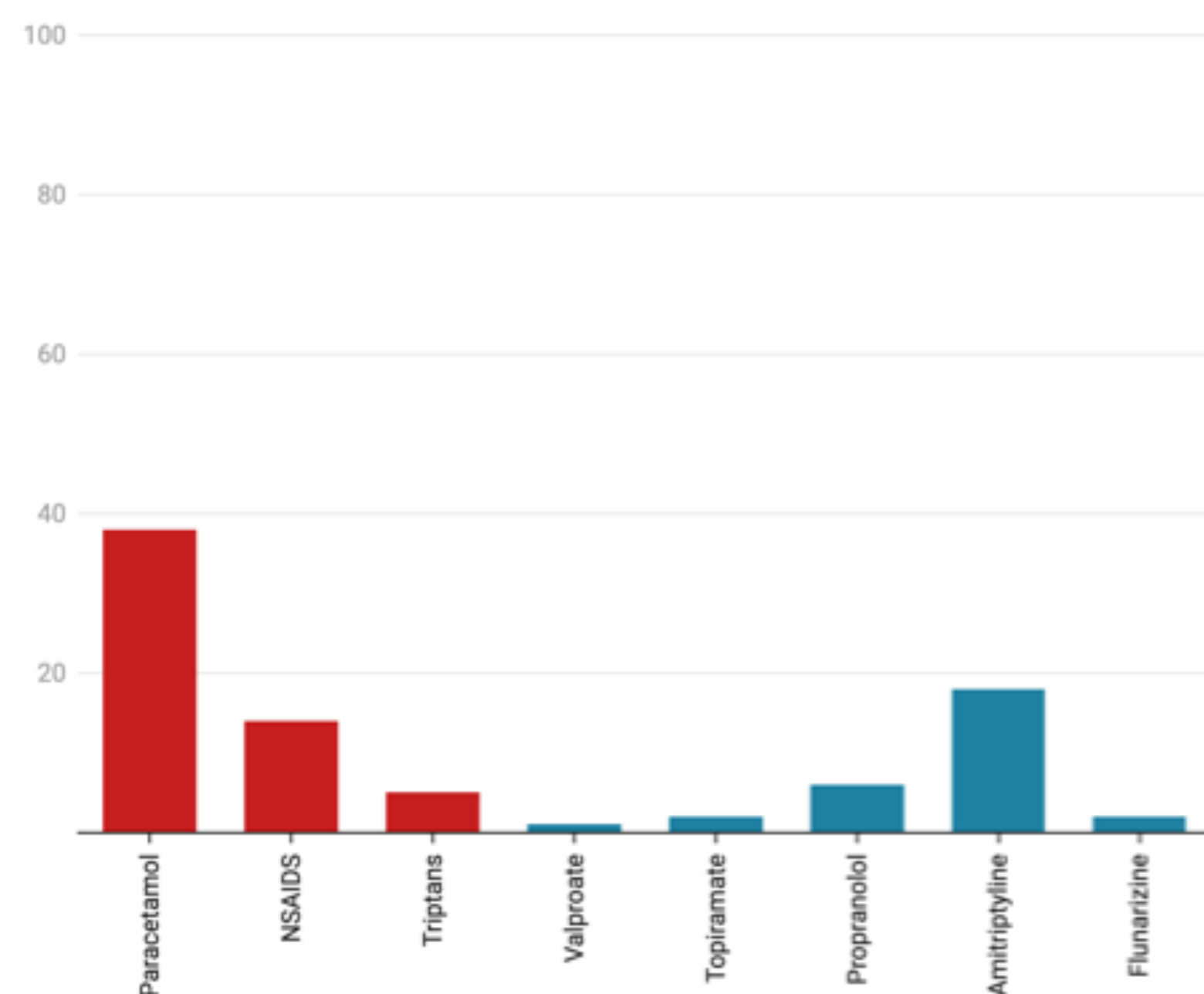
## Distribution of participants (n=377)



## Estimated gender distribution



Distribution of Headache Medication Prescriptions by Treatment Type in Mongolia

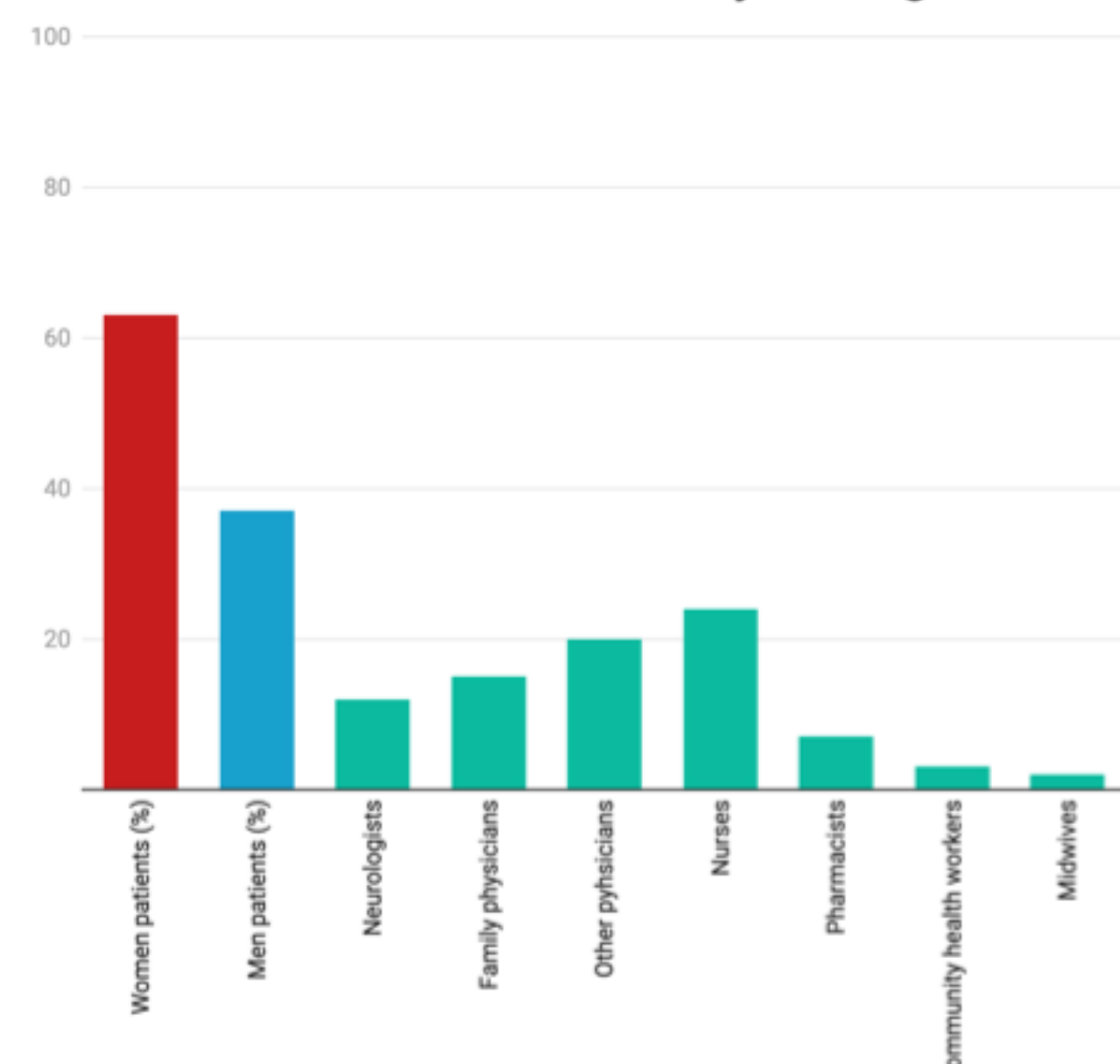


In this column chart, red bars represent physicians' choices for prescribing acute migraine treatments, while blue bars reflect selections for prophylactic therapies.

There are significant disparities in access to medication.

- Essential treatments such as triptans are scarce, and advanced therapies (CGRP mAbs, gepants, ditans, and botulinum toxin A) are unavailable.
- Mirtazapine appears frequently among medications provided to patients who cannot pay, likely due to its low cost or use for comorbid depression/anxiety.
- Most patients use NSAIDs, which are affordable and easily accessible without a prescription.

Gender and Headache Care Diversity in Mongolia



This column chart illustrates the gender distribution among patients with headaches and the diversity of healthcare providers involved in headache management in Mongolia.

The data highlight a heterogeneous distribution of healthcare providers, with nurses (n=89) and other physicians (n=75) forming the most prominent professional groups in headache care.

## DISCUSSION

This study provides the first comprehensive assessment of headache burden and healthcare access in Mongolia.

Significant economic and structural barriers hinder effective headache management. Financial limitations, workforce shortages, and urban–rural disparities are among the most critical challenges.

Structured headache care models from high-income countries offer guidance for system-level improvements. Policy reforms should focus on expanding insurance coverage, improving provider training, and reducing regional inequities.

Integrating multidisciplinary care approaches is essential to strengthen service delivery.

Achieving equitable and accessible headache care in Mongolia requires targeted investments and long-term health planning.