Understanding Headache Care in Low-Resource Settings: Key Lessons from the IHS Survey in the Republic of Moldova

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Introduction

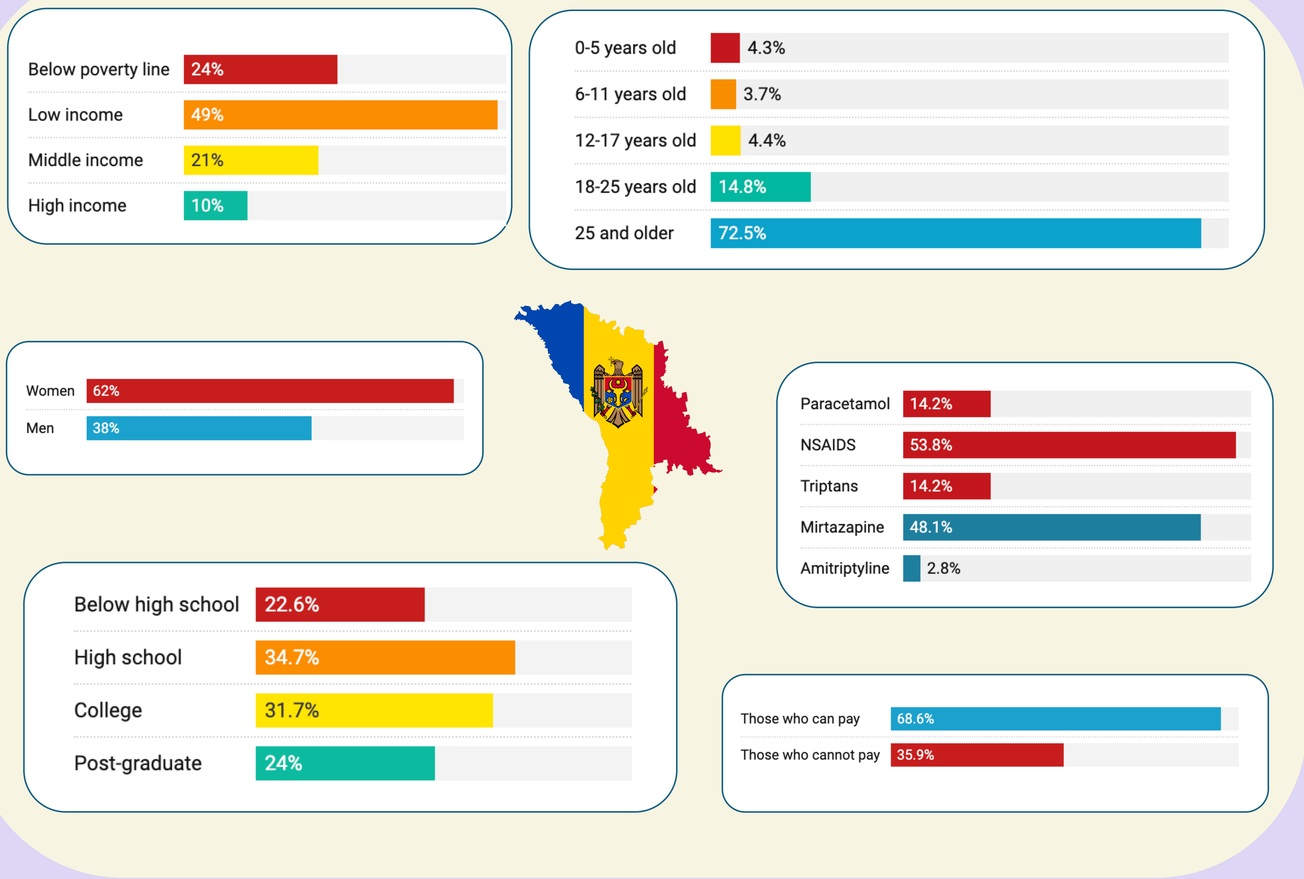
Migraine is a prevalent and disabling neurological disorder that remains underdiagnosed and undertreated, particularly in low- and middle-income countries (LMICs). As part of the IHS/MENAA initiative, this study investigates urban–rural disparities in headache care in Moldova, highlighting gaps in provider training, diagnostic accuracy, and access to evidence-based treatment.

Methods

A national cross-sectional survey of 212 healthcare professionals was conducted using a modified HARDSHIP-based questionnaire covering provider training, treatment practices, access to medications and resources, and patient demographics. Descriptive and comparative analyses assessed regional and professional disparities.

Results

- **Participant Characteristics**
  A total of 212 healthcare providers participated: neurologists (42.9%), nurses (17.0%), pharmacists (14.2%), family physicians (7.1%), and others; 0.9% were neurosurgeons.
- **Workplace and Patient Demographics**
  Most worked in hospitals (72.2%), followed by pharmacies (12.7%) and clinics (9.9%). Providers estimated 24.3% of patients lived below the poverty line and 49.0% were low-income.
- **Patient Profile**
  Clinicians saw 23.5 ± 24.1 headache patients per week. Of these, 62.0% were women, and 72.5% were aged ≥25. Pediatric cases were rare (under 5: 4.3%, 6–11: 3.7%, 12–17: 4.4%).
- **Economic Barriers and Medication Access**
  Medications were paid out-of-pocket by 41.0% of patients; 35.9% could not afford them, though 68.6% could afford some to a degree.
- **Prescribing Patterns and Access Disparities**
  NSAIDs (53.8%), paracetamol (14.2%), and triptans (14.2%) were most prescribed. NSAIDs/paracetamol were equally accessible, but triptan access was lower among those unable to pay (6.1% vs. 25.5%). Preventive use was low (e.g., topiramate 1.9%, propranolol 0.9%, amitriptyline 2.8%), and newer agents (CGRP MABs, gepants, ditans) were unavailable. In Moldova, only analgesics are reimbursed; triptans lack coverage, and MABs are unregistered.



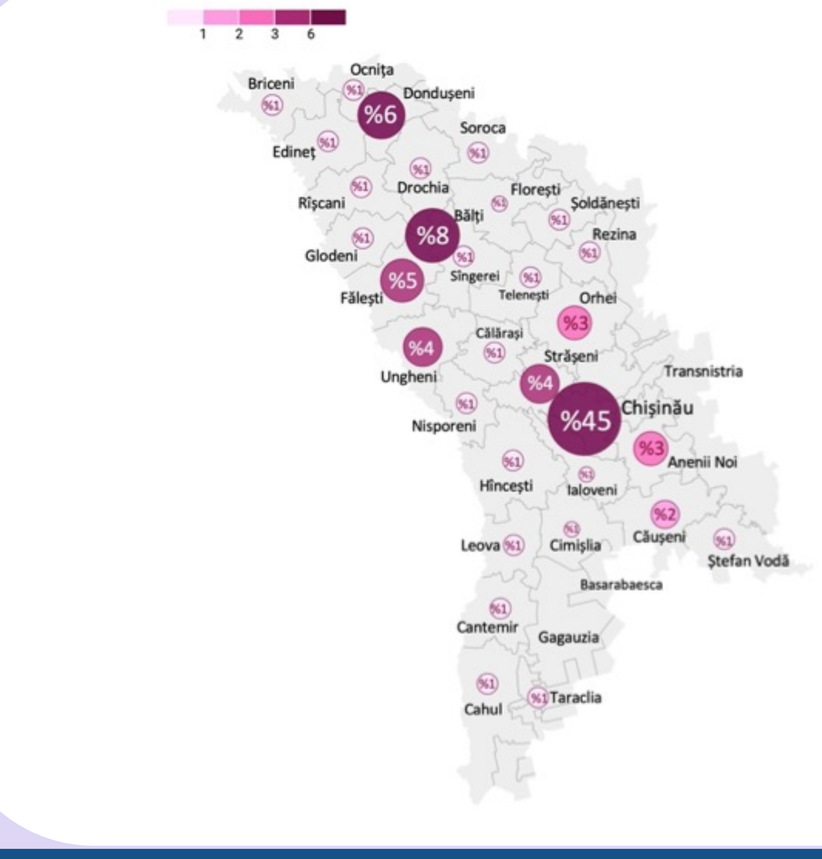


Figure 1. Distribution of Surveyed Healthcare Providers in Moldova. The percentages represent the proportion of healthcare providers in each city relative to the total number of healthcare providers surveyed nationwide. Larger circles and darker shades indicate higher participation rates. The highest concentration of participants is in Chișinău (45%), followed by Bălți (8%) and Dondușeni (6%).

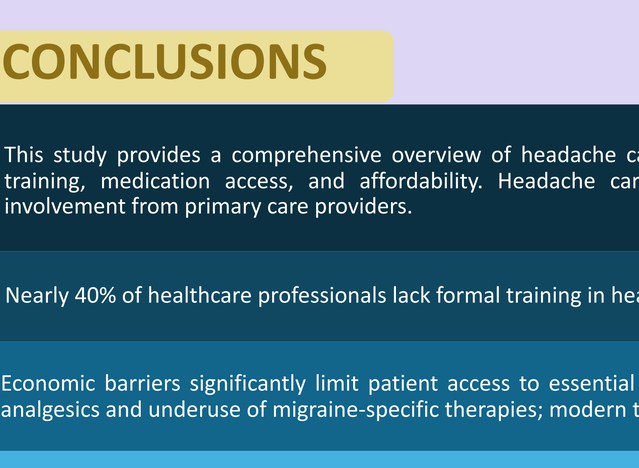
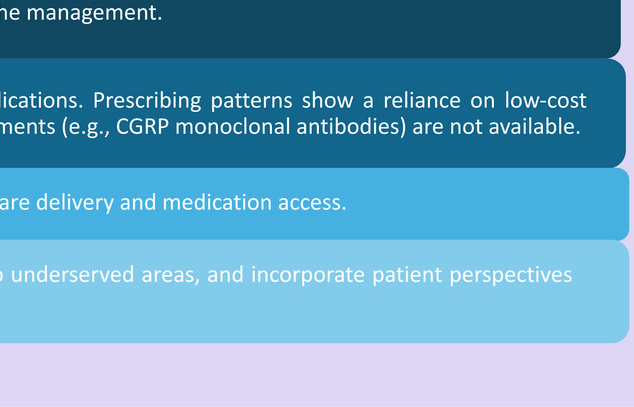
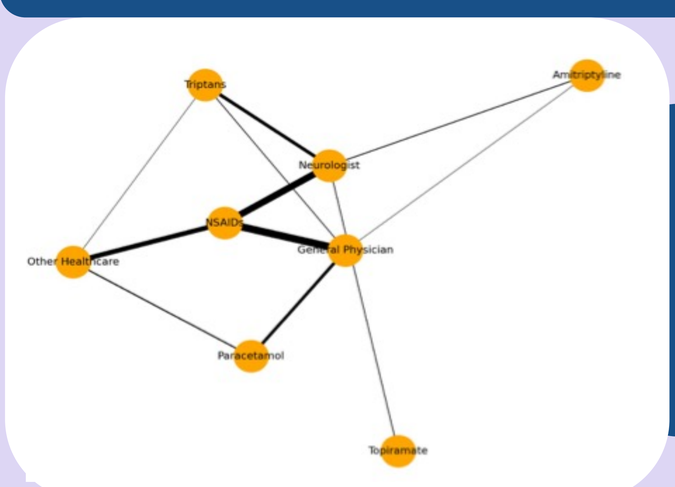


Figure 2. Acute therapies like NSAIDs and paracetamol dominate prescribing, while evidence-based preventive options are underutilized, with mirtazapine prescribed mainly to patients unable to afford standard treatments (48.1%). These patterns highlight gaps in implementing evidence-based strategies and the need for updated national guidelines and financial support for essential headache care.

Figure 3. Heatmap of Medication Availability and Prescription Frequency in Moldova
While NSAIDs and paracetamol are accessible across economic groups, access to triptans and migraine-specific therapies is lower among patients who cannot pay, and modern treatments like CGRP monoclonal antibodies, gepants, and ditans are entirely unavailable. The frequent use of mirtazapine among financially vulnerable patients and the absence of newer therapies underscore treatment inequities and the need for national policy interventions.





This network diagram shows the relationships between provider types and their prescribing patterns for headache management in Moldova. Node size reflects provider or drug importance, edge thickness indicates prescribing frequency, and the figure highlights disparities in migraine-specific treatment use across providers.

CONCLUSIONS

This study provides a comprehensive overview of headache care in Moldova, revealing major gaps in provider distribution, training, medication access, and affordability. Headache care is predominantly urban and hospital-based, with limited involvement from primary care providers.

Nearly 40% of healthcare professionals lack formal training in headache management.

Economic barriers significantly limit patient access to essential medications. Prescribing patterns show a reliance on low-cost analgesics and underuse of migraine-specific therapies; modern treatments (e.g., CGRP monoclonal antibodies) are not available.

Network and heatmap analyses illustrate systemic inconsistencies in care delivery and medication access.

Future efforts should aim to address educational gaps, expand care to underserved areas, and incorporate patient perspectives for sustainable, equitable headache care models.