EPIDEMIOLOGICAL FEATURES AND DYNAMICS OF DEMENTIA REGISTRATION IN THE REPUBLIC OF KARAKALPAKSTAN

(according to the organic register of psychiatric services for 2021-2025)

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ABSTRACT

Dementia is one of the most significant medical and social problems in modern healthcare, associated with the progressive decline of cognitive functions, loss of self-care ability, and increased need for long-term patient care. In conditions of population aging, the problem of early detection and organization of specialized care for patients with dementia is becoming particularly relevant.

The aim of this study was to analyze the dynamics of dementia registration in the Republic of Karakalpakstan for the period 2021-2025 based on data from the psychiatric service's organic register, as well as to evaluate factors influencing the detection of the disease.

The material for the study was the clinical observation of patients with mental and behavioral disorders in the Republic of Karakalpakstan. An analysis was conducted on the number of registered patients diagnosed with dementia, the dynamics of primary registration of the disease, and the specifics of medical care organization.

A gradual increase in the number of registered dementia cases has been established: from 235 patients in 2021 to 368 patients in 2024. By August 2025, the

number of patients with the established diagnosis was 411 people. The resulting dynamics indicate an increase in the detection of the disease; however, a significant discrepancy remains between the official registration and the presumed prevalence of dementia among the elderly population.

The results obtained confirm the need to implement systemic cognitive screening at the primary healthcare level, improve the interdisciplinary approach, and develop support programs for patients and caregivers.

KEYWORDS: dementia, cognitive disorders, epidemiology, organic register, psychiatric service, old age, Republic of Karakalpakstan.

INTRODUCTION

Dementia is a syndrome of chronic or progressive cognitive impairment that includes decreased memory, learning ability, thinking, orientation, and performance of daily activities. The disease is the result of various pathological processes in the brain and most often develops in elderly individuals.

According to the World Health Organization, there were approximately 57 million people with dementia worldwide in 2021, with more than 60% of patients living in low- and middle-income countries. Every year, about 10 million new cases of the disease are registered worldwide. The most common form is Alzheimer's disease, which accounts for approximately 60-70% of all cases of dementia. [1; 4]

Modern research indicates that dementia is not only a medical but also a social issue, as the disease is accompanied by a gradual loss of patient independence and significant burden on family members. [2; 3] According to the Lancet Commission on Prevention, Intervention, and Care for Dementia, early detection of the disease, control of vascular risk factors, and comprehensive support for patients and caregivers are of great importance. [12]

For the Republic of Karakalpakstan, the problem of dementia is particularly

relevant due to the age structure of the population, the high prevalence of cardiovascular diseases, diabetes mellitus, and other risk factors for cognitive decline. Furthermore, the specifics of population distribution, the presence of rural and remote areas, and limited access to specialized care may contribute to the late detection of the disease.

Despite the growing attention to the problem of cognitive impairments, official statistics often reflect only a fraction of the actual number of patients. This phenomenon is associated with insufficient detection of the early stages of the disease, the lack of regular cognitive screening in primary healthcare, and the late application of patients for medical care.

Purpose of the study. Analyze the dynamics of dementia registration in the Republic of Karakalpakstan for 2021–2025 based on data from the organic register of psychiatric services and identify the main problems in identifying the disease and organizing medical care.

MATERIALS AND METHODS

The study was conducted based on the analysis of data from the organic register of patients with mental and behavioral disorders in the Republic of Karakalpakstan.

The object of the study was patients diagnosed with dementia who were under clinical observation in the psychiatric service.

A retrospective analysis was conducted:

- number of registered patients with dementia;
- dynamics of primary detection of the disease for the period 2021-2024;
- number of patients under observation by August 2025;
- organizational factors affecting disease detection.

Descriptive statistics, comparative assessment of dynamic indicators, and epidemiological analysis were used for the analysis.

RESEARCH RESULTS

As of August 2025, 17,916 patients with various mental and behavioral disorders were under the dispensary observation of the psychiatric service of the Republic of Karakalpakstan.

Of these, 411 patients were diagnosed with dementia, accounting for 2.3% of the total number of individuals on the dispensary register.

The obtained indicator reflects the predominantly registered prevalence of the disease and cannot fully characterize the actual number of dementia patients in the region. The likely presence of a significant number of undiagnosed cases is attributed to the late referral of patients, insufficient use of screening methods, and the lack of systematic identification of cognitive impairments among elderly individuals.

Analysis of the dynamics of dementia registration in the Republic of Karakalpakstan for the period 2021-2025 showed a gradual increase in the number of identified patients. This trend may be related to both the real increase in the number of people with cognitive impairments due to population aging and the improvement in disease detection within the healthcare system.

Table 1

Dynamics of dementia registration cases in the Republic of Karakalpakstan for 2021-2025

(*The rate of change is calculated relative to the number of registered patients in 2024*)

Year	Number of registered patients with dementia	Per 100 thousand population over 60 years of age	Change rate
2021	235	12	-
2022	registration data is presented as an increase in the indicator	14	+16,7%

2023	registration data is presented as an increase in the indicator	19	+35,7%
2024	368	18	−5,3%
2025 (august)	411	is refined based on the total population of 60+	+11,7%*

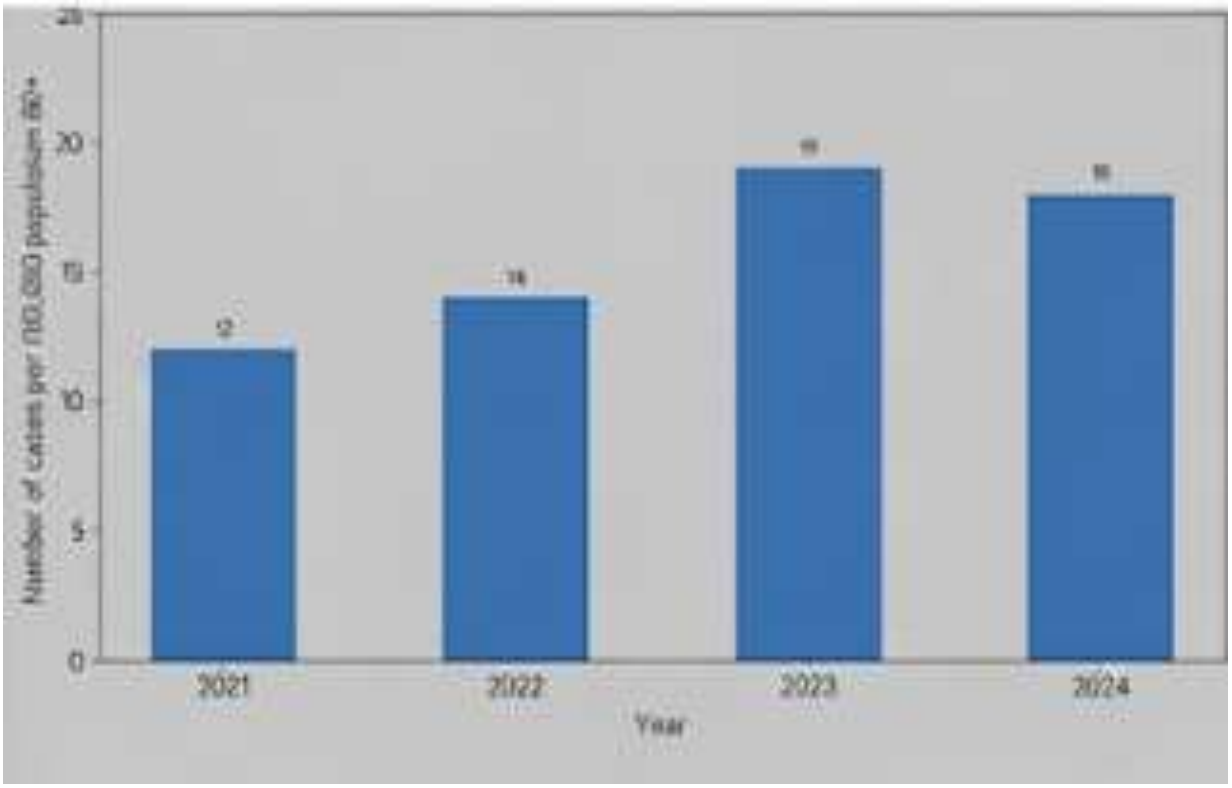
During the analyzed period, the number of registered patients increased from 235 in 2021 to 368 in 2024, corresponding to a 56.6% increase in the absolute number of registered patients. By August 2025, the number of patients registered with dementia reached 411 people.

It should be noted that an increase in the number of registered cases does not necessarily indicate a proportional increase in true morbidity. To a greater extent, it can reflect increased diagnostic efficiency, improved patient routing, and increased attention from healthcare workers to the problem of cognitive impairments.

The dynamics presented in Figure 1 show an increase in disease registration rates from 12 cases per 100,000 people over 60 years of age in 2021 to 19 cases in 2023, with subsequent stabilization of the indicator in 2024.

Figure 1

Dynamics of dementia registration indicators among the population over 60 years of age in the Republic of Karakalpakstan



DISCUSSION

The results obtained demonstrate a significant discrepancy between the registered prevalence of dementia and the presumed actual prevalence of the disease among the elderly population.

In international studies, the prevalence of dementia among individuals over 60 years of age is estimated to be significantly higher than the figures registered in the Republic of Karakalpakstan. According to global epidemiological studies, the prevalence of dementia in this age group can reach 5-8%, which significantly exceeds the official registration figures.

One of the reasons for this discrepancy is the phenomenon of the "epidemiological iceberg", in which medical statistics primarily include a portion of patients with severe cognitive impairments, while patients with mild cognitive

impairments and early stages of dementia remain outside the focus of specialists' attention.

The main reasons for insufficient detection include:

- lack of mandatory cognitive screening of elderly people in primary healthcare;
- insufficient awareness among the population regarding the early symptoms of the disease;
- late application of patients and relatives for medical assistance;
- limited accessibility of specialized assistance in certain areas;
- mistaken perception of memory decline as a natural process of aging.

Identifying patients with vascular risk factors is of particular importance. Arterial hypertension, diabetes mellitus, cerebrovascular disorders, and other cardiovascular diseases are important modifiable risk factors for the development of cognitive impairments.

The modern approach to managing patients with dementia involves not only drug therapy but also comprehensive medical and social support. An important direction is the training of relatives and caregivers, as it is they who daily face the need to resolve medical, psychological, and domestic issues related to the progression of the disease. [2;3]

In this regard, one of the most effective organizational solutions is the creation of "Care Schools" - educational programs for family members and other individuals caring for patients with dementia. The primary goal of such schools is to develop practical care skills, increase awareness of the disease's course, teach methods for preventing complications and correcting behavioral disorders, and provide psychological support to caregivers. The inclusion of "Care Schools" in the dementia care system contributes to improving the quality of life for patients and their families, reducing the emotional burden on caregivers, and increasing the effectiveness of

comprehensive medical and social rehabilitation.

ORGANIZING "CARE SCHOOLS" AS AN ELEMENT OF COMPREHENSIVE CARE FOR PATIENTS WITH DEMENTIA

Creating specialized educational programs for relatives of dementia patients is a promising direction for improving care.

The main tasks of "Care Schools" shall be:

- training in safe methods of daily care;
- prevention of complications related to restricted motor activity;
- developing skills for proper communication with patients;
- teaching methods for controlling behavioral disorders;
- prevention of emotional burnout in caregivers.

Psycho-educational work with patient families is of particular importance. Relatives should understand that behavioral changes, memory impairment, and decreased independence are manifestations of the disease and not characteristics of the patient.

The inclusion of "Care Schools" in the dementia care system contributes to improving the quality of life for patients and their families, reducing the burden on caregivers, and increasing the effectiveness of comprehensive medical and social rehabilitation.

PRACTICAL RECOMMENDATIONS

Based on the analysis conducted, the following directions for improving care for patients with dementia in the Republic of Karakalpakstan are proposed:

1. Implementing regular cognitive screening among individuals over 60 at the level of family polyclinics. To screen for cognitive impairments, the MMSE and MoCA scales are most widely used. [10; 11]
2. Increasing the vigilance of primary care physicians regarding early manifestations

of dementia. The diagnostic criteria for dementia comply with the NIA-AA and DSM-5-TR recommendations [14, 15].

3. Creation of a regional register of dementia patients with the possibility of dynamic observation.

4. Development of interdisciplinary interaction between psychiatrists, neurologists, general practitioners, and social services.

5. Organizing "Care Schools" for relatives of patients with dementia.

CONCLUSIONS

1. Analysis of the organic register of the psychiatric service of the Republic of Karakalpakstan revealed a gradual increase in the number of registered patients with dementia during the 2021-2025 period.

2. An increase in the number of identified cases reflects an increase in the detection of the disease, but official indicators likely do not reflect the full scale of cognitive impairment prevalence.

3. The main problem remains the late diagnosis of the disease, especially in the stages of mild cognitive impairment and early dementia.

4. Improving the early detection system, creating a patient registry, and developing family support programs are important directions for improving the quality of care for patients with dementia.

CONCLUSION

The presented results of the analysis of the organic register of the psychiatric service of the Republic of Karakalpakstan indicate a gradual increase in the number of registered patients diagnosed with dementia during the 2021-2025 period. The results obtained can be used to improve the organization of specialized psychiatric and medical-social care for patients with dementia within the framework of implementing priority areas for the development of the healthcare system of the Republic of

Uzbekistan. [13]

Despite the positive dynamics in disease detection, official registration rates remain significantly lower than expected epidemiological values, indicating the presence of a significant number of patients with undiagnosed cognitive impairments.

The main directions for improving care for patients with dementia are the development of an early detection system, the introduction of cognitive screening in primary healthcare, the professional development of specialists, and the creation of a comprehensive support system for patients and their families.

The development of educational programs for patients' relatives ("Care Schools") is of particular importance, as they allow for improved quality of long-term care, reduced risk of complications, and reduced psychological burden on caregivers.

Thus, the problem of dementia in the Republic of Karakalpakstan requires further epidemiological study, improvement of the patient registry, and the formation of an interdisciplinary model of medical and social care.

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