Journal of Health Development
e2663-1776

Original article

Regional Patterns and Trends of Acute Pancreatitis Hospitalizations in Karaganda Region: A Five-year Retrospective Study (2020–2024)

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Received: October 17, 2025
Revised: November 23, 2025
Accepted: December 09, 2025
Published: December 24, 2025

Citation: Aigul Baltabayeva, Kayrat Shakeyev, Dmitriy Klyuyev, Zhanna Esmagambetova, Gulnara Mahmetova, Alina Ogizbayeva. Regional Patterns and Trends of Acute Pancreatitis Hospitalizations in Karaganda Region: A Five-year Retrospective Study (2020–2024) J Health Dev. 2025, 60 (7), jhd042. https://doi.org/10.32921/2663-1776-2025-60-7-jhd042

Abstract

The limited regional data on acute pancreatitis in Kazakhstan highlights the need for a systematic epidemiological analysis. The aim of the study is to assess hospitalization indicators for acute pancreatitis and its complications in the Karaganda region over a five-year period (2020–2024). Data from the Electronic Register of Inpatient Patients, Form No.14, comprising 10,417 hospitalization cases, were analyzed. Descriptive statistical methods were applied (χ^2 test, Kruskal–Wallis test, Spearman's correlation analysis, and the Kaplan–Meier method for survival analysis). The hospitalization rate in the region ranged from 143.86 to 191.81 per 100,000 population, with a peak in 2022. No statistically significant differences by sex were found (phi = 0.065), while the majority of hospitalized patients were of working age (66.1%). The predominant form of the disease was idiopathic pancreatitis (K85.0), whereas biliary and alcohol-related forms were less common but showed distinct age-specific patterns. The average length of hospital stay was 4–10 days in 81.3% of patients. Mortality was 1.74%, increasing to 2.12% in 2024. Over the five-year period, hospitalization rates in the Karaganda region fluctuated without a stable upward or downward trend. This study fills a gap in the regional epidemiological assessment of acute pancreatitis in the Republic of Kazakhstan. The findings have scientific and practical significance for the healthcare system and emphasize the need for enhanced monitoring of high-risk groups, including elderly patients with biliary forms and young patients with alcohol-induced pancreatitis.

Keywords: acute pancreatitis, epidemiology, seasonality, hospitalization rates, mortality.

1. Introduction

Acute pancreatitis is the most common pancreatic disorder worldwide. Severe disease occurs in approximately 20% of patients, which is largely driven by the increasing prevalence of obesity, alcohol dependence, and comorbid conditions [1–3].

Global epidemiological data indicate that the incidence of acute pancreatitis has been rising over recent decades [4,5]. A systematic review and meta-analysis covering the period from 1961 to 2016 reported an average annual increase of 3.07% (95% CI: 2.30–3.84). The most pronounced growth was observed in North America (3.67%) and Europe (2.77%), whereas rates in Asia remained relatively stable [6].

In Europe, the incidence varies from 20 to 30 cases per 100 000 population per year, with regional variations attributed both to differences in alcohol consumption and the prevalence of gallstone disease [7,8]. The highest ratios of biliary to alcoholic etiology were reported in Southern Europe (Greece, Turkey, Italy, and Croatia), whereas the lowest were observed in Eastern Europe (Latvia, Finland, Romania, Hungary, Russia, and Lithuania) [9].

These findings are consistent with the results of the Global Burden of Disease (GBD) 2013 analysis, which demonstrated an increase in the global incidence of both acute and chronic pancreatitis between 1990 and 2013. However, that analysis contained almost no data from Central Asia, including Kazakhstan, highlighting the need for local epidemiological studies [1].

In a retrospective study covering the period from 1990 to 2019, the age-standardized mortality rate (ASMR) for acute pancreatitis in Kazakhstan was 4.97 per 100 000 population, characterizing the country as one of the regions with the highest disease burden, along with Russia, Guinea-Bissau, Ukraine, and Burkina Faso [10].

According to predictive models for 2023–2024, if current trends persist, the absolute number of cases and deaths due to pancreatitis will continue to increase by 2050 as a result of population growth and aging. The number of new cases is expected to rise from 2.8 million to 4 million, while annual deaths may increase from 115,000 to approximately 170,000, indicating a high risk of further escalation of the healthcare burden [11,12].

Data from the U.S. National Center for Health Statistics (NCHS) show that approximately 275,000 hospitalizations for acute pancreatitis are recorded annually in the United States, with healthcare expenditures reaching 2.5 billion USD [13,14]. Furthermore, a retrospective analysis conducted in the U.S. over a ten-year period (2002–2012) revealed a 13.2% increase in hospitalizations for acute pancreatitis ($p < 0.001$), underscoring the growing epidemiological significance of this disease [15].

Local studies on acute pancreatitis in Kazakhstan remain limited, with published data available only from the cities of Semey and Akmola Region. In a study conducted in Semey during 2019–2021, 333 hospitalization cases were analyzed, focusing on structure, treatment duration, and outcomes [16]. According to published data from Akmola Region (2009–2022), the hospitalization rate increased from 117.1 to 144.6 per 100 000 population, along with a rise in mortality among surgically treated patients [17].

Despite the availability of isolated regional studies on the epidemiology of acute pancreatitis in Kazakhstan, comprehensive data for a five-year period-including analysis of seasonality, length of hospital stay, mortality, and distribution by clinical forms of acute pancreatitis-have not been reported to date. Therefore, the aim of the present study was to conduct a comprehensive retrospective epidemiological assessment of hospitalizations with a diagnosis of acute pancreatitis and its complications in the Karaganda Region over a five-year period (2020–2024).

2. Materials and methods

The present study is based on a retrospective analysis of official data obtained from the Electronic Registry of Inpatients (ERI) an information system supervised by the Karaganda Branch of the Republican State Enterprise on the Right of Economic Management "National Scientific Center for Health Development named after Salidat Kairbekova" [17].

The study sample included all registered cases of acute pancreatitis (ICD-10 code: K85) and pancreatic cysts as complications of acute pancreatitis (ICD-10 code: K86.2) recorded in the Karaganda Region during the period from 2020 to 2024.

The classification of nosological entities was performed according to the ICD-10 codes, as presented in Table 1.

Table 1– Classification according to ICD-10 codes

ICD-10 codes	Name
K85.0	Acute idiopathic pancreatitis
K85.1	Acute biliary pancreatitis
K85.2	Acute alcoholic pancreatitis
K85.3	Acute drug-induced pancreatitis
K85.8	Other acute pancreatitis
K85.9	Acute pancreatitis, unspecified
K86.2	Pancreatic cyst

Analytical Methods

To assess the dynamics of hospitalizations for acute pancreatitis over the five-year period (2020–2024), the hospitalization rate per 100 000 population was calculated. Official population data for the Karaganda Region were obtained from the Population Attachment Registry (PAR) information system [17].

Seasonal patterns of hospitalizations were analyzed based on patients' admission dates, which were subsequently aggregated by month and by season (winter, spring, summer, and autumn) using monthly statistics for the five-year observation period.

Analysis of Hospital Stay and Outcomes

The duration of hospitalization was assessed based on the number of inpatient bed-days, followed by grouping of patients according to the length of hospital stay. This approach allowed identification of the most frequent treatment durations and the categorization of patients with either prolonged or, conversely, short hospitalizations.

Treatment outcomes (discharge, self-discharge, transfer, or death) were analyzed in relation to demographic characteristics (sex and age) and clinical form of the disease. Age structure was assessed using three categories: children and adolescents (0–17 years), adults of working age (18–59 years), and elderly patients (≥ 60 years).

Clinical forms of acute pancreatitis were classified according to the International Classification of Diseases, 10th Revision (ICD-10), including differentiation by complicated forms.

Statistical Analysis

Primary data visualization, grouping, and chart construction were performed using Microsoft Power BI. Descriptive and analytical statistical calculations were carried out with the Statistics Kingdom online platform and STATISTICA 8 software (StatSoft) [18].

Descriptive statistics were applied along with the Pearson χ^2 test to analyze differences between categorical variables, the Kruskal–Wallis test for comparison of several independent groups with non-normal distributions, and Spearman's rank correlation coefficient to evaluate associations between variables.

For the seasonality analysis, each seasonal group included five observations corresponding to the mean number of hospitalizations in a given season. Considering the limited number of measurements and the uncertainty regarding parametric test assumptions, the Friedman test-a nonparametric alternative to repeated-measures ANOVA-was applied. Additionally, mortality was analyzed using the Kaplan–Meier survival method with the log-rank test to assess intergroup differences.

Ethical Considerations

This study was conducted using anonymized and aggregated data obtained from official sources, thereby eliminating the need for informed consent or formal ethical approval. All stages of the research complied with the legislation of the Republic of Kazakhstan and adhered to the principles of the Declaration of Helsinki, ensuring data protection and confidentiality. The collected data were used exclusively for research and analytical purposes.

3. Results

Over the five-year period (2020–2024), a total of 10 417 cases of acute pancreatitis and its complications were registered in the Karaganda Region. As shown in Figure 1, the highest number of hospitalizations was recorded in 2021 - 2345 cases, accounting for 22.5% of all hospitalizations, while the lowest number was observed in 2023, with 1885 cases.

When calculating the hospitalization rate, the highest level was recorded in 2022 (191.81 per 100 000 population), while the lowest was observed in 2020 (143.86).

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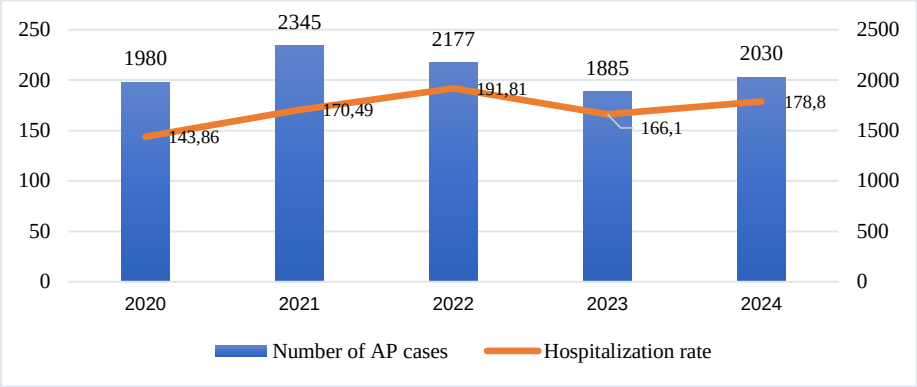

Figure 1 – Total number of cases and hospitalization rate for acute pancreatitis in the Karaganda Region (2020–2024

In 2023, the rate decreased to 166.1, but rose again in 2024 to 178.8, representing a 7.6% increase compared to 2023. Thus, the overall five-year trend of hospitalizations in the region demonstrated a fluctuating pattern without a stable tendency toward either increase or decrease.

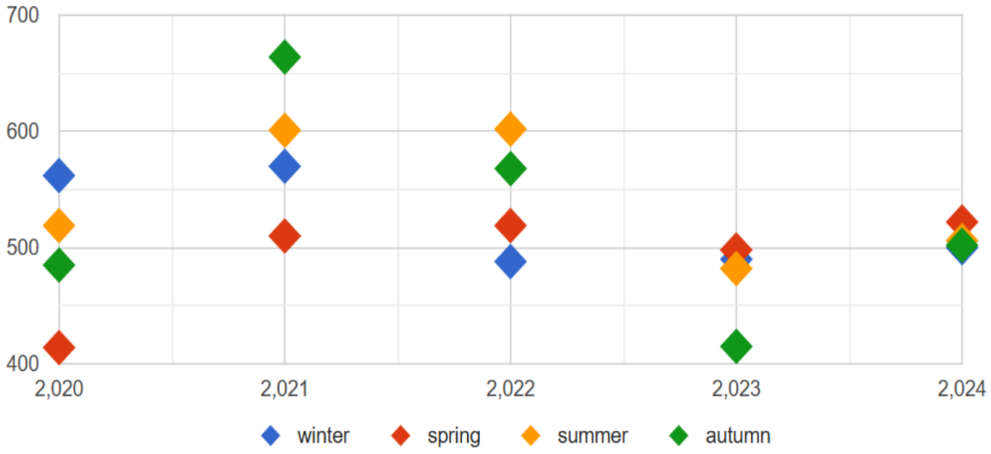

Figure 2 – Hospitalizations for acute pancreatitis by season in 2020–2024

During the analyzed five-year period, moderate monthly fluctuations in hospitalization rates were observed: the highest values were recorded in January (n=953), March (n=962), and August (n=947), whereas the lowest number of cases occurred in April (n=692). However, the results of the Friedman test for seasonal dependence (χ^2=1.08; df=3; p=0.782) revealed no statistically significant differences between seasons. The low effect size (W=0.072) further supports the minimal discrepancies among the ranked data (Figure 2). Thus, despite the visually apparent month-to-month variations, no statistically significant seasonal dynamics in hospitalizations for acute pancreatitis were identified.

Analysis by sex showed that during 2020–2024, women accounted for 55.3% (n=5763) of acute pancreatitis cases, while men accounted for 44.7% (n=4654). According to the results of the Pearson χ^2 goodness-of-fit test (χ^2=43.36; df=1; p<0.0001), the difference between the observed and expected distributions (based on the sex ratio in the Karaganda Region population) was statistically significant; however, the effect size was small (phi=0.065). Therefore, the sex distribution of hospitalizations only slightly deviated from the demographic proportions of the population and does not indicate a marked sex-related selectivity in hospitalizations for acute pancreatitis in the Karaganda Region.

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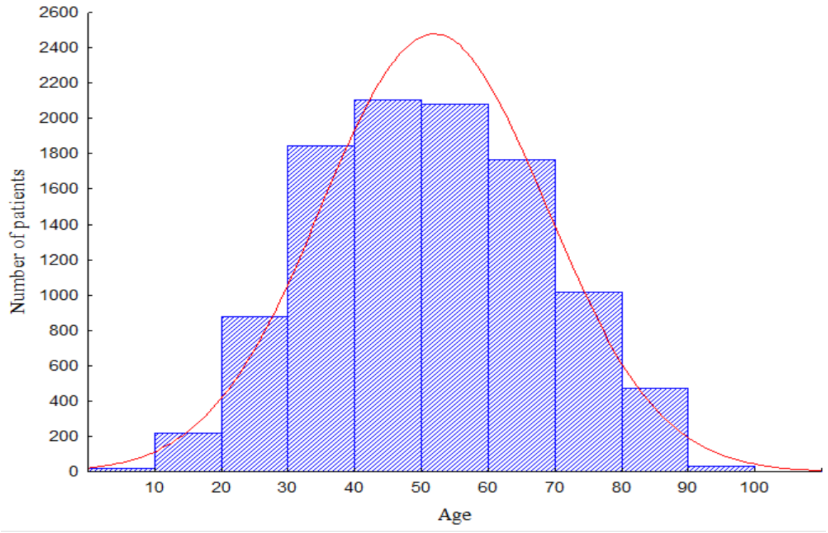

Figure 3 – Age distribution of acute pancreatitis cases

The age distribution of patients with acute pancreatitis shows a mean age of 51.6 ± 16.8 years and a median of 51 years (n=10417) (Figure 3). The largest proportion of cases (n=5838) occurred among individuals of working age (35–60 years), indicating the predominance of the disease within the active segment of the adult population.

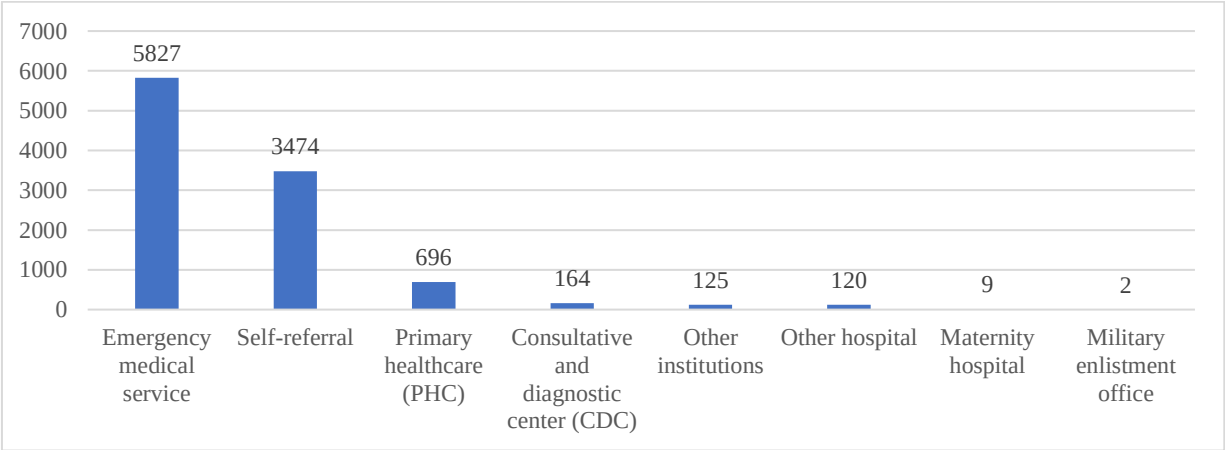

Figure 4 – Sources of patient referral to hospital

Analysis of referral sources for patients hospitalized with acute pancreatitis revealed that the majority of cases – 55.9% (n=5827) - were admitted through emergency medical services, while a substantial proportion - 33.3% (n=3474) - represented self-referrals (Figure 4). The remaining referral categories, including primary healthcare organizations (PHC), consultative and diagnostic centers (CDC), and other medical institutions, collectively accounted for less than 10%. Referrals from maternity hospitals and military enlistment offices were minimal and did not significantly affect the overall structure of patient inflow.

Analysis of hospitalization duration showed that the most common length of stay ranged from 4 to 10 days: 38.2% (n=3980) of patients were hospitalized for 4–6 days, and 43.2% (n=4,501) for 7–10 days, totaling 8481 patients, which accounted for 81.3% of the entire cohort (n=10 417). Short-term hospitalization lasting 1–3 days was recorded in 9.4% (n=975), while 1.5% (n=156) of cases had hospital stays exceeding 20 days.

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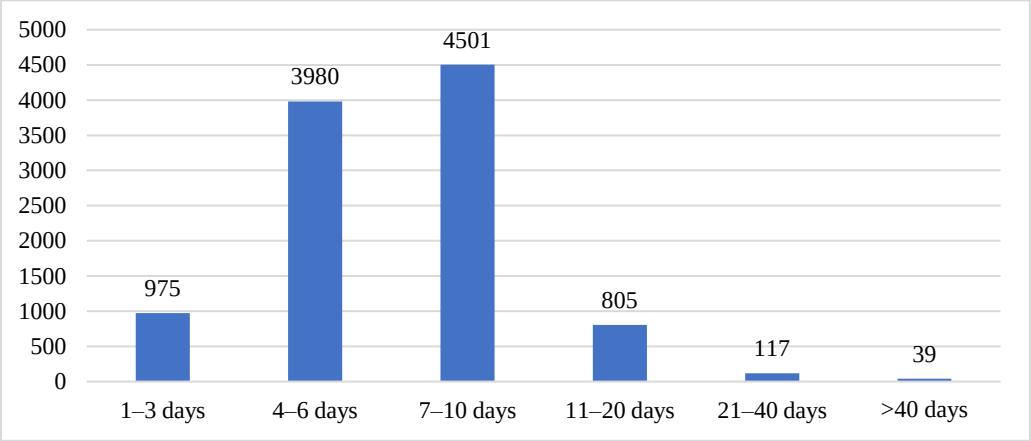

Figure 5 – Distribution of acute pancreatitis cases by length of hospital stay

The overall distribution was asymmetric with a leftward skew, indicating the predominance of short hospital stays and a relatively smaller number of severe cases. The mean length of hospital stay was 7.5 days, and the median was 6.7 days, indicating a left-skewed distribution with a predominance of short hospitalizations.

To assess the relationship between patient age and length of hospitalization (converted to a ranked variable), Spearman's rank correlation analysis was applied. The results demonstrated a statistically significant but very weak positive correlation between age and length of stay (r_s=0.0836; n=10 417; p<0.0001), indicating a minimal yet significant tendency for hospitalization duration to increase with patient age.

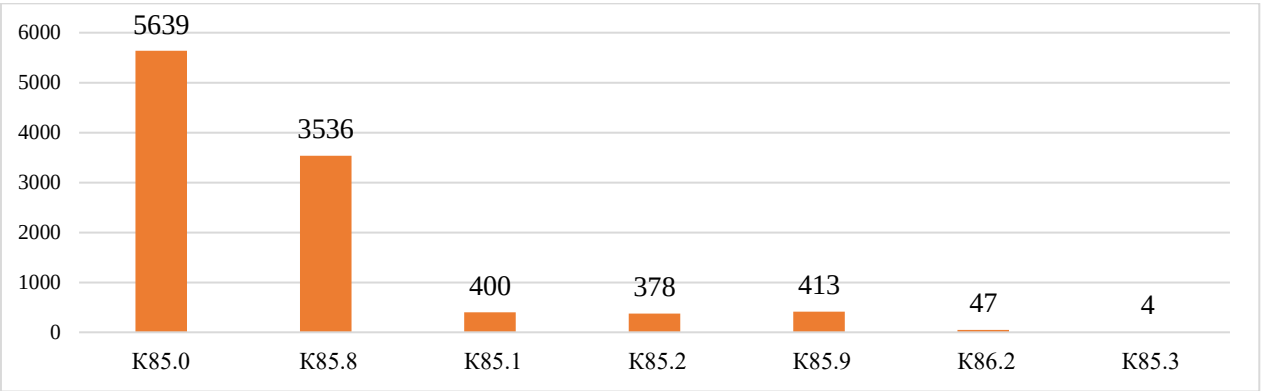

Figure 6 – Distribution of acute pancreatitis forms according to ICD-10 codes

Analysis of the distribution of clinical forms of acute pancreatitis revealed that the disease was most frequently coded as idiopathic pancreatitis (K85.0) in 54.1% of cases (n=5632), followed by other acute pancreatitis (K85.8) in 33.9% (n=3536) (Figure 6).

Diagnoses with specified etiology were less common: biliary pancreatitis (K85.1) – 3.8%, alcohol-induced pancreatitis (K85.2) - 3.6%, and drug-induced pancreatitis (K85.3) - isolated cases (n=4). In addition, unspecified acute pancreatitis was recorded in 3.96% of cases, and pancreatic cyst (K86.2) as a complication of acute pancreatitis was identified in 0.45%.

Thus, the findings indicate limited etiological verification of diagnoses for acute pancreatitis.

Figure 7 presents the analysis of the age structure of patients with acute pancreatitis by clinical form, classified according to ICD-10 codes. The Kruskal–Wallis nonparametric test was used for comparison, as the age distributions did not follow a normal pattern and the group sizes were unequal.

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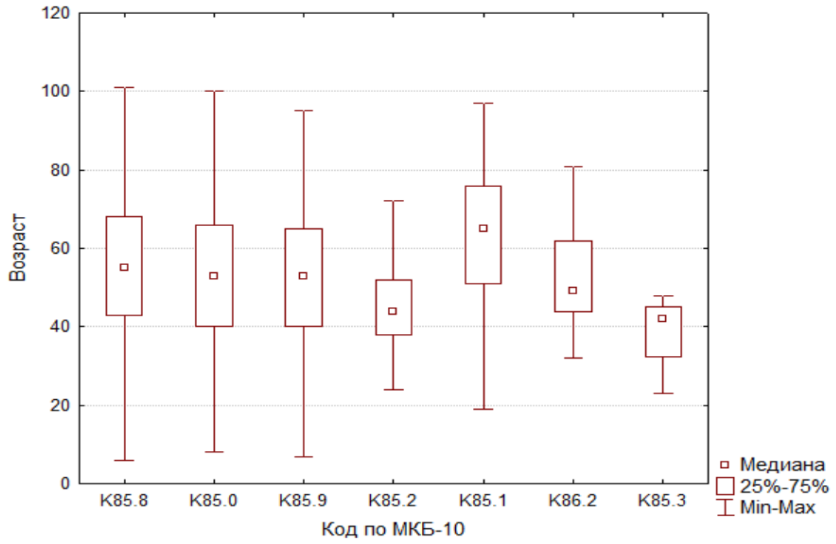

Figure 7 – Age distribution of patients with different forms of acute pancreatitis according to ICD-10 codes

The analysis revealed a statistically significant difference (H=270.04; df=6; n=10 417; p<0.001). The lowest mean rank was observed in the alcoholic pancreatitis (K85.2) group, indicating a predominantly younger patient population in this category. In contrast, biliary (K85.1) and idiopathic (K85.0) forms were characterized by higher mean ranks, reflecting an age shift toward patients over 50 years. Other forms, including pancreatic cyst (K86.2), unspecified (K85.9), and drug-induced (K85.3) pancreatitis, represented smaller subgroups but followed the same overall pattern of age-related differences.

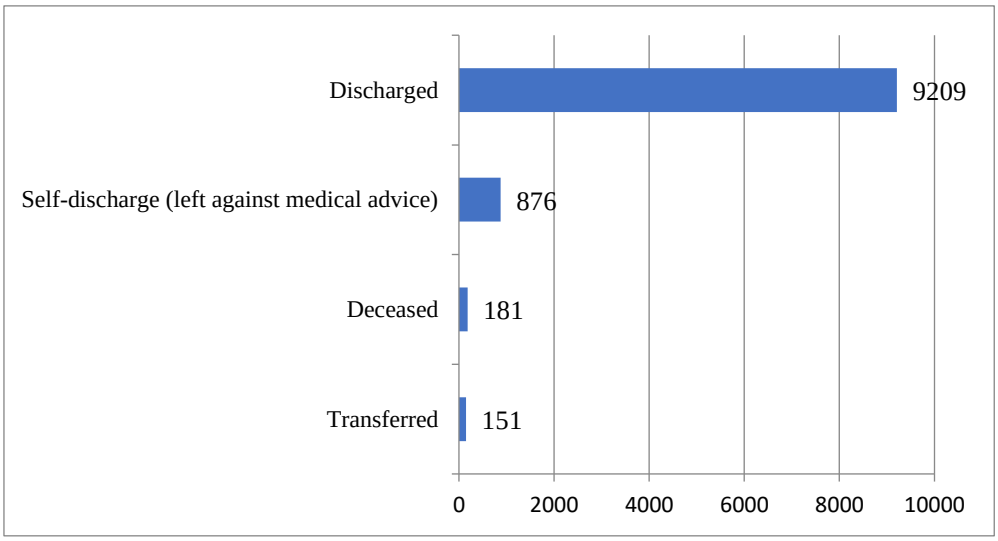

Figure 8 – Treatment outcomes of patients with acute pancreatitis

As shown in Figure 8, the majority of patients with acute pancreatitis (88.4%, n=9209) were successfully discharged from the hospital during the 2020–2024 period. The number of self-discharges was also relatively high (8.4%, n=876), while fatal outcomes were recorded in 1.7% of cases (n=181).

Most hospitalized patients with acute pancreatitis received conservative treatment - 96.1% (n=10,010), which highlights the predominance of mild to moderately severe forms of the disease that do not require surgical intervention. Surgical procedures were performed in only 3.9% of cases (n=407), among which the most frequent were laparotomy (0.92%, n=96),

drainage of the lesser sac (0.71%, n=74), and laparoscopy (0.65%, n=68). Other types of surgical interventions - including marsupialization of a pancreatic cyst, cyst drainage, peripheral pancreatic resection, pancreaticojejunostomy, and others - were performed less frequently (each accounting for <0.5%).

Overall, the structure of treatment strategies for patients with acute pancreatitis reflects a clear tendency toward a predominantly non-invasive approach to management.

Among patients who underwent surgery (n=407), the mortality rate was 25.8% (n=105). These findings suggest that surgically treated patients represented clinically more severe forms of acute pancreatitis.

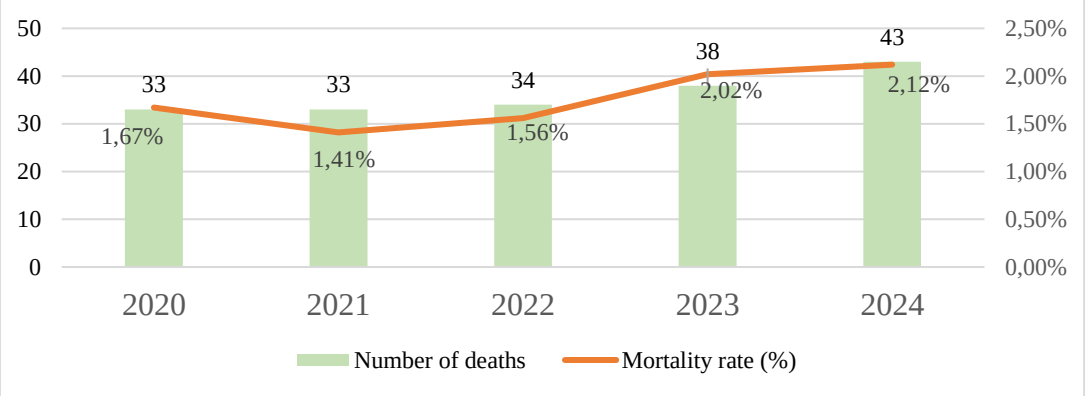

Figure 9 - Total number of deaths and dynamics of mortality among patients with acute pancreatitis

Over the five-year period in the Karaganda Region, a gradual increase in mortality associated with acute pancreatitis was observed (Figure 9). In 2020–2021, the number of fatal cases remained stable (n=33 each year). However, starting from 2022, a steady upward trend was noted: 34 cases in 2022, 38 in 2023, and 43 in 2024, corresponding to an average annual increase of 12.8%.

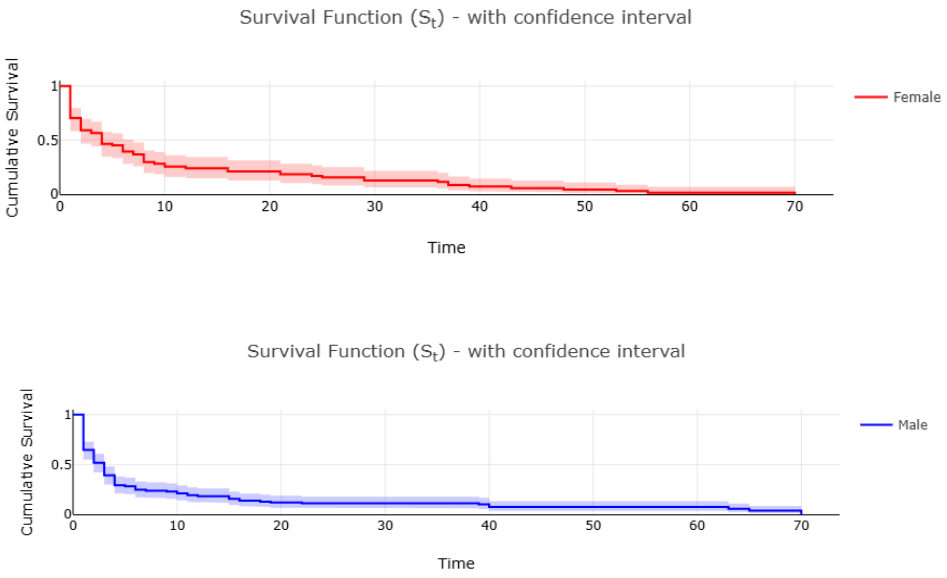

Figure 10 – Comparison of survival curves by sex

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Across the total cohort of patients with acute pancreatitis during 2020–2024, the overall mortality rate averaged 1.74% (181 of 10 417 cases). Year-by-year analysis demonstrated a gradual upward trend in mortality - from 1.41% in 2021 to 2.12% in 2024. These findings are consistent with international data reported in the Global Burden of Disease (GBD) 2019 and other epidemiological studies, where the mortality rate ranges from 1.5% to 5%, depending on the severity and etiology of the disease.

The Kaplan–Meier survival analysis by sex demonstrated that, despite a visually higher survival curve among women, the difference was not statistically significant, and the observed effect size was small (phi=0.046) (Figure 10). This indicates a weak association between sex and survival. The results of the log-rank test comparing survival between men and women with acute pancreatitis also revealed no statistically significant difference (χ^2=0.30; df=1; p=0.53).

Accordingly, the observed frequencies of fatal outcomes – 71 cases in men and 110 in women - did not differ from those expected under a model of equal risk distribution.

3. Discussion

In the Karaganda Region, 10 417 cases of acute pancreatitis were registered over a five-year period (2020–2024), underscoring the clinical and epidemiological relevance of this condition in the region. The hospitalization rate demonstrated a fluctuating pattern without a consistent trend toward increase or decrease. No statistically significant sex difference was observed (phi=0.065), and the majority of hospitalized patients were of working age (66.1%). The diagnosis K85.0 – acute idiopathic pancreatitis was the most frequently coded, whereas biliary and alcoholic forms were less common but showed a clear age-specific distribution.

Inpatient treatment was predominantly conservative, while the proportion of surgical interventions remained low (4%). The average length of hospitalization ranged from 4 to 10 days. A relatively high rate of self-discharges (8.4%) warrants further investigation of underlying causes. A statistically significant yet weak positive correlation was found between age and length of hospital stay (rs=0.0836; n=10 417; p<0.0001), suggesting a tendency toward longer treatment among patients aged ≥60 years. The overall mortality rate was 1.74%, with a gradual increase observed from 2022 to 2024. The Kaplan–Meier survival analysis with the log-rank test showed no statistically significant difference by sex, indicating a similar prognosis regardless of gender.

The findings of this study revealed that the largest proportion of acute pancreatitis cases corresponded to forms with unidentified etiology [19]. Specifically, the disease was most frequently coded as idiopathic pancreatitis (K85.0) in 54.1% of cases (n=5632), and as “other acute pancreatitis” (K85.8) in 33.9% of cases (n=3536). Together, these categories accounted for nearly 88% of all recorded cases, representing one of the key observations of the present analysis. Such a distribution likely reflects not the true etiological structure of the disease but rather systemic challenges in diagnostic verification and coding within medical records. Therefore, the high proportion of cases with undefined or unspecified etiology underscores the need to improve diagnostic algorithms and enhance the accuracy of etiological classification of acute pancreatitis in clinical practice.

In a retrospective study conducted in the city of Semey, acute edematous pancreatitis was identified in 91.9% of cases, whereas pancreatic necrosis occurred in only 8.7%. Despite a similar treatment approach, predominantly conservative in both regions (93.1% in Semey and over 95% in the Karaganda region), the mortality rate in Semey was more than twice as high—4.2% compared to 1.74% in our study [16].

Demographic patterns also differed. In Semey, women (52.6%) and elderly patients (40.8%) predominated, whereas in our dataset no significant sex difference was detected (phi=0.065), and most hospitalizations involved working-age individuals (66.1%). These differences likely reflect sample characteristics: the Semey study was based on a single clinic with limited cases, while our analysis encompassed the entire region over five years, providing greater representativeness.

Particular attention should be given to surgical cases. In the Karaganda Region, mortality among operated patients reached 25.8% (105 of 407), reflecting the clinical severity and frequency of complicated forms requiring surgical intervention.

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This figure is comparable to data from the Akmola Region, where mortality reached 33.3% [17].

In Akmola Region, the incidence of acute pancreatitis increased from 112.1 to 144.6 per 100 000 population over a 13-year period, while the rate of surgical interventions decreased by 4.2%. In contrast, our study focused not on total incidence but on hospitalization frequency, as only inpatient cases were included. Over the five-year period, no marked trend toward increased hospitalizations was identified, and the frequency of surgical interventions remained consistently low. These differences may reflect regional variations in hospital care organization for acute pancreatitis.

In the present study, moderate fluctuations in the number of hospitalizations for acute pancreatitis were observed, with a relative increase in January, March, and August, and the lowest rates recorded in April. However, statistical analysis using the Friedman test ($p=0.782$) did not confirm the presence of a significant seasonal pattern. Reports from other countries indicate an increased incidence of acute pancreatitis - predominantly of alcoholic etiology - during holiday periods, including the Christmas–New Year season (an increase of 48%; 95% CI 24–77%), while the frequency of biliary forms remained stable. In contrast, no such trend was identified in the present analysis, which likely reflects regional variations in the etiological structure of the disease and lifestyle-related factors within the population.

Despite encompassing a substantial volume of data over a five-year period, this study has several limitations that should be considered when interpreting the results.

First, its retrospective design and reliance on aggregated data limited the ability to fully assess disease severity, complications, and comorbidities.

Second, the high proportion of idiopathic cases of acute pancreatitis (K85.0) may be attributable both to diagnostic challenges and to deficiencies in medical coding, thereby reducing the accuracy of the disease structure assessment and complicating etiological comparisons with studies from other regions.

Third, the Kaplan–Meier analysis was conducted without complete censoring due to the lack of detailed follow-up data for discharged patients, which may also constrain the interpretation of survival outcomes.

Fourth, the study did not include data on outpatient cases of acute pancreatitis, which somewhat limits the epidemiological completeness of the dataset, particularly with regard to mild forms of the disease.

4. Conclusions

This study fills an existing gap in the regional epidemiological assessment of acute pancreatitis in Kazakhstan over the five-year period (2020–2024).

A high proportion of idiopathic forms was identified, possibly reflecting both diagnostic challenges and limitations in medical coding.

The majority of hospitalized patients were of working age; a positive correlation was found between age and treatment duration.

The findings highlight the need for increased attention to high-risk groups - elderly patients with biliary pancreatitis and younger individuals with alcohol-related etiology.

Conflict of Interest. The authors declare no conflict of interest.

Acknowledgments. The authors express their gratitude to Uspanova M.V. and Mukhamedzhanova M.Zh., chief specialists of the Karaganda Branch of the National Scientific Center for Health Development named after Salidat Kairbekova, for their contribution to this study.

Funding. No external funding was received for this study.

Author Contributions: Conceptualization: A.D.B., K.T.S., D.A.K.; Methodology: A.D.B., K.T.S., Zh.M.E.; Validation: K.T.S., Zh.M.E., D.A.K., A.V.O.; Formal analysis: A.D.B., G.E.M., A.V.O.; Writing – Original Draft: A.D.B., A.V.O., G.E.M.; Writing – Review & Editing: A.D.B., D.A. K., G.E.M. All authors have read and approved the final version of the manuscript and signed the copyright transfer agreement.

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Аймақтық үлгілер мен үрдістер: Қарағанды облысындағы жедел панкреатит бойынша ауруханаға жатқызу жағдайларының бес жылдық ретроспективті талдауы (2020–2024 жж.)

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Түйіндеме

Қазақстандағы жедел панкреатит бойынша өңірлік деректердің шектеулілігі жүйелі эпидемиологиялық талдау жүргізу қажеттілігін айқындайды. Зерттеудің мақсаты – 2020–2024 жылдар аралығында Қарағанды облысында «Жедел панкреатит» диагнозымен және оның асқынуларымен ауруханаға жатқызу көрсеткіштерін бағалау. Зерттеуде «Стационарлық науқастардың электрондық тіркелімі» ақпараттық жүйесінің №14 формасы бойынша тіркелген 10 417 жағдай талданды. Сипаттамалық статистика әдістері (χ^2-тест, Краскел–Уоллис критерийі, Спирмен корреляциялық талдауы және өміршеңдікті талдауға арналған Каплан–Майер әдісі) қолданылды. 100 000 тұрғынға шаққандағы госпитализация коэффициенті есептелді. Жас топтары, өлім-жітім, ауруханада болу ұзақтығы (тәуліктік төсек-күнмен) және жедел панкреатиттің маусымдылығы қарастырылды. Өңірдегі госпитализация коэффициенті 100 000 тұрғынға шаққанда 143,86-дан 191,81-ге дейін өзгерді, ең жоғары деңгей 2022 жылы тіркелді. Демографиялық көрсеткіштер бойынша жынысқа байланысты статистикалық тұрғыда мәнді айырмашылық байқалмады ($p<0.05$), ал госпитализацияланғандардың басым бөлігі еңбекке қабілетті жастағы адамдар болды (66,1%). Ең жиі кездескен түрі идиопатиялық панкреатит (K85.0) болды, билиарлық және алкогольдік түрлері сирек тіркелгенімен, айқын жас ерекшеліктерін көрсетті. Орташа госпитализация ұзақтығы 81,3% жағдайда 4–10 күнді құрады. Өлім-жітім деңгейі 1,74% болды және 2024 жылы 2,12%-ға дейін өсті. Бес жылдық кезеңде Қарағанды облысындағы госпитализация жиілігі өсу немесе төмендеу бойынша тұрақты динамикасыз ауытқып отырды. Бұл зерттеу Қазақстан Республикасында жедел панкреатит бойынша өңірлік эпидемиологиялық бағалаудағы ақпаратты толтырады. Алынған деректер денсаулық сақтау жүйесі үшін ғылыми-тәжірибелік маңызға ие және тәуекел топтарын (билиарлық түрі бар егде жастағы науқастар мен алкогольдік этиологиясы бар жас пациенттер) қадағалауды күшейту қажеттілігін айқындайды.

Түйін сөздер: жедел панкреатит, эпидемиология, маусымдық, ауруханаға жатқызу көрсеткіштері, өлім-жітімділік.

https://doi.org/10.32921/2663-1776-2025-60(7)-jhd042

Региональные особенности и тенденции госпитализаций по поводу острого панкреатита в Карагандинской области: Пятилетнее ретроспективное исследование (2020–2024 гг.)

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Резюме

Ограниченность региональных данных в Казахстане по острому панкреатиту подчеркивает необходимость в проведении системного эпидемиологического анализа. Целью данного исследования является оценка показателя госпитализаций с диагнозом «острый панкреатит» и его осложнений в Карагандинской области за пятилетний период (2020–2024гг.). Проанализированы данные из информационной системы «Электронный регистр стационарных больных», согласно форме №14, включающие 10 417 случаев госпитализаций. Использованы методы описательной статистики (χ^2-тест, критерий Краскела–Уоллиса, корреляционный анализ Спирмена и метод Каплан–Майера для анализа выживаемости), выполнены расчеты коэффициентов госпитализаций на 100 000 населения по возрастным группам, а также проведен анализ летальности, продолжительности госпитализации (в койко-днях) и сезонности острого панкреатита. Коэффициент госпитализаций в регионе варьировал от 143,86 до 191,81 на 100 000 населения, с пиковым значением в 2022 году. По демографическим показателям статистически значимого различия по полу не выявлено ($p<0.05$), и большая часть госпитализированных были лица трудоспособного возраста (66,1%). Основной формой заболевания был идиопатический панкреатит (K85.0), тогда как билиарные и алкогольные формы встречались реже, но продемонстрировали отчетливую возрастную специфику. Средняя продолжительность госпитализации составила 4–10 дней у 81,3% пациентов. Летальность составила 1,74% с ростом до 2,12% в 2024 году. За пятилетний период частота госпитализаций в Карагандинской области демонстрировала вариабельность без устойчивой динамики к росту или снижению. Настоящее исследование восполняет пробел в региональной эпидемиологической оценке острого панкреатита в Республике Казахстан. Полученные данные обладают научно-практической ценностью для системы здравоохранения и подчеркивают необходимость усиления мониторинга групп риска: пожилых пациентов с билиарной формой и лиц молодого возраста с алкогольной этиологией.

Ключевые слова: острый панкреатит, эпидемиология, сезонность, показатели госпитализации, летальность.

https://doi.org/10.32921/2663-1776-2025-60(7)-jhd042