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**MORTALITY RATE DURING WINTER MONTHS WITHIN THE FIRST 24 HOURS
OF HOSPITAL ADMISSION: A 3-MONTH OBSERVATIONAL STUDY
AT AN EMERGENCY HOSPITAL**

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Relevance. Mortality during winter months within the first 24 hours of hospital admission is an important early endpoint for assessing acute illness severity and emergency care quality. While 24-hour mortality is widely reported in trauma and sepsis cohorts, the rate in general internal medicine patients brought to emergency facilities is less well defined. According to Liu et al., shock at presentation and a delayed door-to-doctor time independently predict death within the first hospital day. Kovacs et al. observed an overall 24-hour mortality rate of 1.5-4.2% in unplanned emergency admissions, which increased to 8-12% in severe decompensated heart failure, extensive GI bleeding, or septic shock. However, according to Patel et al., the majority of data are from ICU or cardiac cohorts, leaving a void for mixed internal illness populations in non-specialized emergency hospitals.

Aim: to determine the 24-hour mortality rate among patients admitted to the Emergency Hospital over a three-month period from December 2025 to February 2026 and to identify the primary internal disease categories and admission-phase factors associated with early death.

Materials and methods. We performed a retrospective review of medical records from 64 patients admitted to the Emergency Hospital over three months. We collected demographic data, primary admission diagnoses, time from admission to death, and causes of death. The data were organized in Microsoft Excel, utilizing its functions to compute descriptive statistics, including the 24-hour mortality rate, mean age with standard deviation, and frequency distributions of diagnoses for early deaths.

Results and their discussion. Total 24 hour mortality during winter in Emergency Hospital accounted 64 patients. The mean age was 69.1 years (range 32–93 years, SD 14.2), with 37 males (56.8%) and 27 females (43.2%). The most common primary causes of early death were coronary artery disease or ischemic heart disease (n=16, 24.3%), malignancy including cancers of the breast, lung, ovary, liver, pancreas, colon, esophagus, and lymphoma (n=11, 17.6%), and stroke or intracerebral hemorrhage (n=7, 12.2%). Other causes included coma (n=6, 8.1%), alcoholic hepatitis or chronic liver disease (n=5, 6.8%), pneumonia (n=3, 4.1%), mesenteric thrombosis (n=2, 2.7%), traumatic brain injury (n=2, 2.7%), gastrointestinal bleeding (n=2, 2.7%), subarachnoid hemorrhage (n=2, 2.7%), toxic effect of ethanol (n=2, 2.7%), pulmonary embolism (n=1, 1.4%), heart stab wound (n=1, 1.4%), ulcerative enterocolitis (n=1, 1.4%), acute coronary syndrome (n=1, 1.4%), shock/hypotension (n=1, 1.4%), acute pancreatitis (n=1, 1.4%), and COPD with respiratory failure (n=1, 1.4%). Deaths occurred most frequently in January (n=21, 28.4%), followed by December (n=19, 25.7%) and February (n=7, 9.5%). Common comorbidities included arterial hypertension (n=28, 37.8%), type 2 diabetes mellitus (n=12, 16.2%), and obesity (n=4, 5.4%). Documented acute complications preceding death included cerebral edema (n=6), cardiopulmonary failure (n=5), multiple organ failure (n=5), cardiac arrest (n=3), respiratory failure (n=3), peritonitis (n=1), and cancer cachexia with intoxication (n=1). 52 (81,25%) patients had symptoms of fever, sore throat and cough at admission or shortly after admission

Conclusions. In this retrospective study of 64 patients who died within 24 hours of emergency admission, cardiovascular disease (24.3%), malignancy (17.6%), and cerebrovascular events (12.2%) were the leading causes of early mortality. Hypertension and diabetes mellitus were common comorbidities. The predominance of cardiometabolic risk factors among early deaths suggests that chronic disease management prior to admission may play a critical role in acute outcomes. Further prospective research with larger sample sizes is necessary to better understand the causes of early death and to guide targeted interventions in emergency hospital settings.