# Causes of traumatic brain injuries in the Republic of Moldova

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## Abstract

**Background:** Traumatic brain injury (TBI) is a major source of health loss and disability worldwide. Many survivors live with significant disabilities, resulting in major socioeconomic burden. Annually, in Europe are registered 57000 of deaths and 1.5 mln. of hospitalizations. The goal of our study was to examine the number and most frequent causes of TBI in the population of the Republic of Moldova and their distribution in reference groups.
**Material and methods:** This study has included the 3-months' retrospective and 6-months' prospective data in 2 tertiary level hospitals in Moldova. Data were collected using specialized questionnaires, that were eventually analyzed.
**Results:** During these 9 months 518 patients with TBI were registered, aged between 0 and 79, 294 of them were adults and 224 children. The trauma circumstances have been documented in accordance with national and international guidelines. The main causes were the following: the 1st place – falls from height (277 cases), the 2d place – road traffic injuries (149 cases), the 3d place – interpersonal violence (73 cases) and on the 4th place – self-harm injuries (73 cases).
**Conclusions:** Our research provides a detailed picture of TBI-related situation in Moldova. To quantify the real burden of TBI, including the prevalence of TBI-related disability, more study is needed.
**Key words:** traumatic brain injury, trauma circumstances, disabilities.

# Preliminary results of the ENERGY study (Ean NEuro-covid ReGistrY) in the Republic of Moldova

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## Abstract

**Background:** ENERGY registry developed by the European Academy of Neurology studies neurological manifestations in patients with COVID-19 infections. *Diomid Gherman* Institute of Neurology and Neurosurgery joined these efforts in December 2020. The aim of the study was to present the Moldovan cohort of patients with COVID-19 infection and neurological manifestations registered in the ENERGY.
**Material and methods:** The registry recorded demographic data, comorbidities, complications, neurological symptoms in confirmed COVID-19 patients. The patients were evaluated at 6 and 12 months by phone.
**Results:** The Moldovan cohort of patients with COVID-19 and neurological manifestations by May 2021 consists of 168 patients (50.6% men and 49.4% women). Most patients (86.9%) had comorbidities, such as arterial hypertension – 83.3%, diabetes mellitus – 23.2 %, cardiovascular – 27.4 %, obesity – 21.4 %. History of neurological diseases with impact on patient's health was dementia 3.0%, Parkinson's disease – 1.2%, stroke – 19.0%, multiple sclerosis – 1.2%, neuromuscular disorder – 1.2%, neuropathy – 1.8%. Complications requiring medical intervention were dyspnea – 44.6%, pneumonia – 61.9%, cardiovascular – 7.1%, renal insufficiency – 1.2%, coagulation disorder – 4.2% and mechanical ventilation – 16.1%. New neurological findings in patients with COVID-19 infection were headache (24.4%), vertigo (14.3%), cognitive impairment (35.7%), stupor/coma (22.1%), stroke (62.5%), ataxia (11.4%), spinal cord disorder (7.2%), peripheral neuropathy (5.4%). Mortality rate in the cohort was 22.61%.
**Conclusions:** The Moldovan cohort of patients with neurological manifestations during COVID-19 infections registered in the ENERGY registry presented most frequently at the emergency department with stroke, cognitive impairment and headache. They have many comorbidities, history of neurological diseases, complications during hospital stay and high mortality rate.
**Key words:** ENERGY, EAN, Registry, NeuroCOVID.