

Suicidal Attempts as a Reason for Emergency Medical Teams' Call-Outs Based on Examples of Ambulance Service in Siedlce, Poland

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Abstract : The Emergency Medical Teams (EMS) of the Ambulance Service in Siedlce serve the population living in the Mazowieckie Voivodeship (the area of eastern Poland with approximately 550,000 inhabitants). They provide health services at the pre-hospital stage to all life-threatening patients. The analysis covered the interventions of emergency medical teams in cases of suicide attempts that occurred in the years 2015-2018. The study was retrospective. The data was obtained on the basis of digital medical records of completed call-outs. When defining the disease entity, the International Statistical Classification of Diseases and Health Problems ICD-10 prepared by WHO was used. The relationship between selected disease entities and the area of EMT intervention, the patient's sex and age, and the time of occurrence of the event were investigated. Non-urban area was defined as the area inhabited by a population below 10,000 residents. Statistical analysis was performed using Pearson's χ^2 test and presenting the percentage of cases in the study group. Of all the suicide attempts, drug abuse cases were the most frequent, including: X60 (Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics); X61 (Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonian and psychotropic drugs, not elsewhere classified); X62 (Intentional self-poisoning by and exposure to narcotics and psycholeptics [hallucinogens], not elsewhere classified); X63 (Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system); X64 (Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substance) oraz X70 (Intentional self-harm by hanging, strangulation and suffocation). In total, they accounted for 69.4% of all interventions to suicide attempts in the studied period. Statistical analysis shows significant differences ($\chi^2 = 39.30239$, $p < 0.0001$, $n = 561$) between the area of EMT intervention and the type of suicide attempt. In non-urban areas, a higher percentage of X70 diagnoses was recorded (55.67%), while in urban areas, X60-X64 (72.53%). In non-urban areas, a higher proportion of patients attempting suicide was observed compared to patients living in urban areas. For X70 and X60 - X64 in total, the incidence rates in non-urban areas were 80.8% and 56%, respectively. Significant differences were found ($\chi^2 = 119.3304$, $p < 0.0001$, $n = 561$) depending on the method of attempting suicide in relation to the patient's sex. The percentage of women diagnosed with X60-X64 versus X70 was 87.50%, which was the largest number of patients ($n = 154$) as compared to men. In the case of X70 in relation to X60-X64, the percentage of men was 62.08%, which was the largest number of patients ($n = 239$) as compared to women ($n = 22$). In the case of X70, the percentage of men compared to women was as high as 92%. Significant differences were observed ($\chi^2 = 14.94848$, $p < 0.01058$) between the hour of EMT intervention and the type of suicide attempt. The highest percentage of X70 occurred between 04:01 - 08:00 (64.44%), while X60-X64 between 00:01 - 04:00 (70.45%). The largest number of cases of all tested suicide attempts was recorded between 16:01 - 20:00 for X70 ($n = 62$), X60 - X64 ($n = 82$), respectively. The highest percentage of patients undertaking all suicide attempts studied at work was observed in the age range of 18-30 (31.5%), while the lowest was in the age group over 60 years of age. (11%). There was no significant correlation between the day of the week or individual months of the year and the type of suicide attempt - respectively ($\chi^2 = 6.281729$, $p < 0.39238$, $n = 561$) and ($\chi^2 = 3.348913$, $p < 0.9857$, $n = 561$). There were also no significant differences in the incidence of suicide attempts for each year in the study period ($\chi^2 = 3.348913$, $p < 0.9857$, $n = 561$). The obtained results suggest the necessity to undertake preventive measures in order to minimize the number of suicide attempts. Such activities should be directed especially at young patients living in non-urban areas.

Keywords : emergency med, emergency medical team, attempted suicide, pre-hospital

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