

Differences Between Pediatric Burns From Rural/Urban Areas And Complete/Incomplete Families: Does Distance And Family Status Play A Key Role?

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PURPOSE:

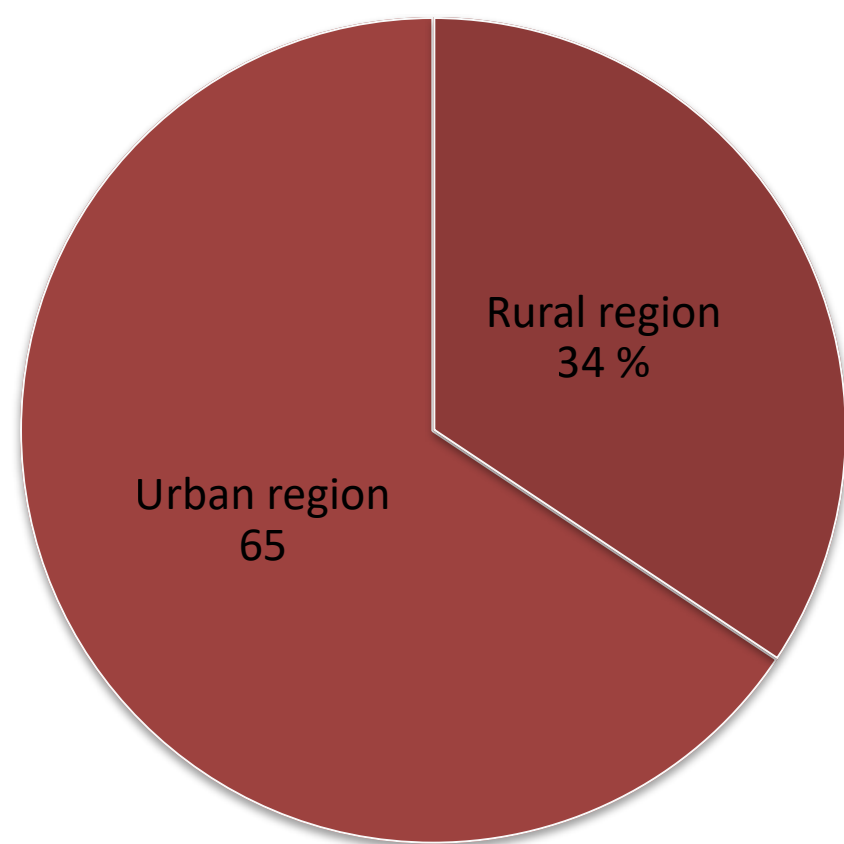
There are many important factors that impact the outcomes following pediatric burn injuries. Several epidemiologic factors impact the types of burns pediatric patients experience. There are also several factors that impact the care they receive. The purpose of this study was to evaluate the epidemiological characteristics and access to care of pediatric burn patients admitted to a single burn unit in the Czech Republic. In particular, our goal was to assess whether differences exist between the severity and treatment of children who sustain burns in rural or urban areas and the presence of a complete or incomplete family.

METHODS

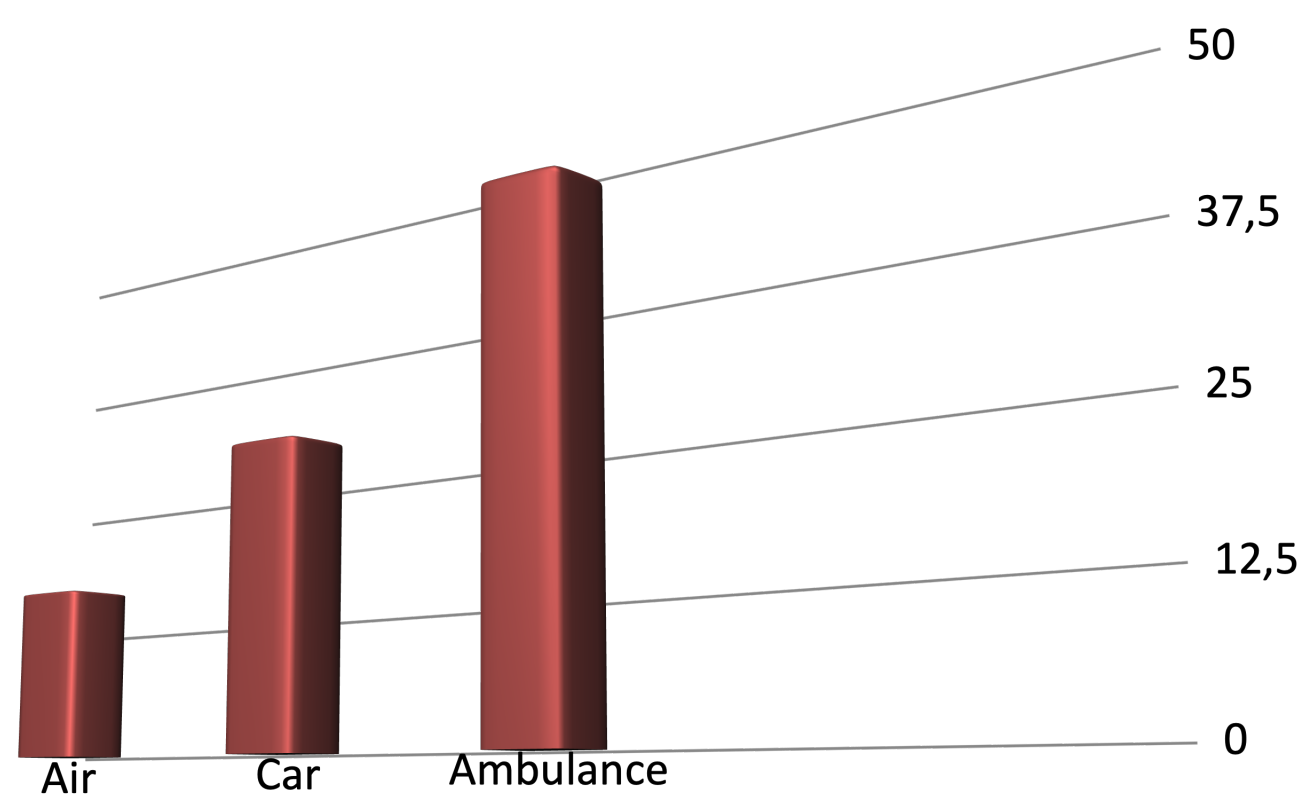
A retrospective analysis was conducted from the January 2005 to December, 2022. Patients under the age of 18 years, who were hospitalized in the single Burn Unit, were included in the study.

RESULTS

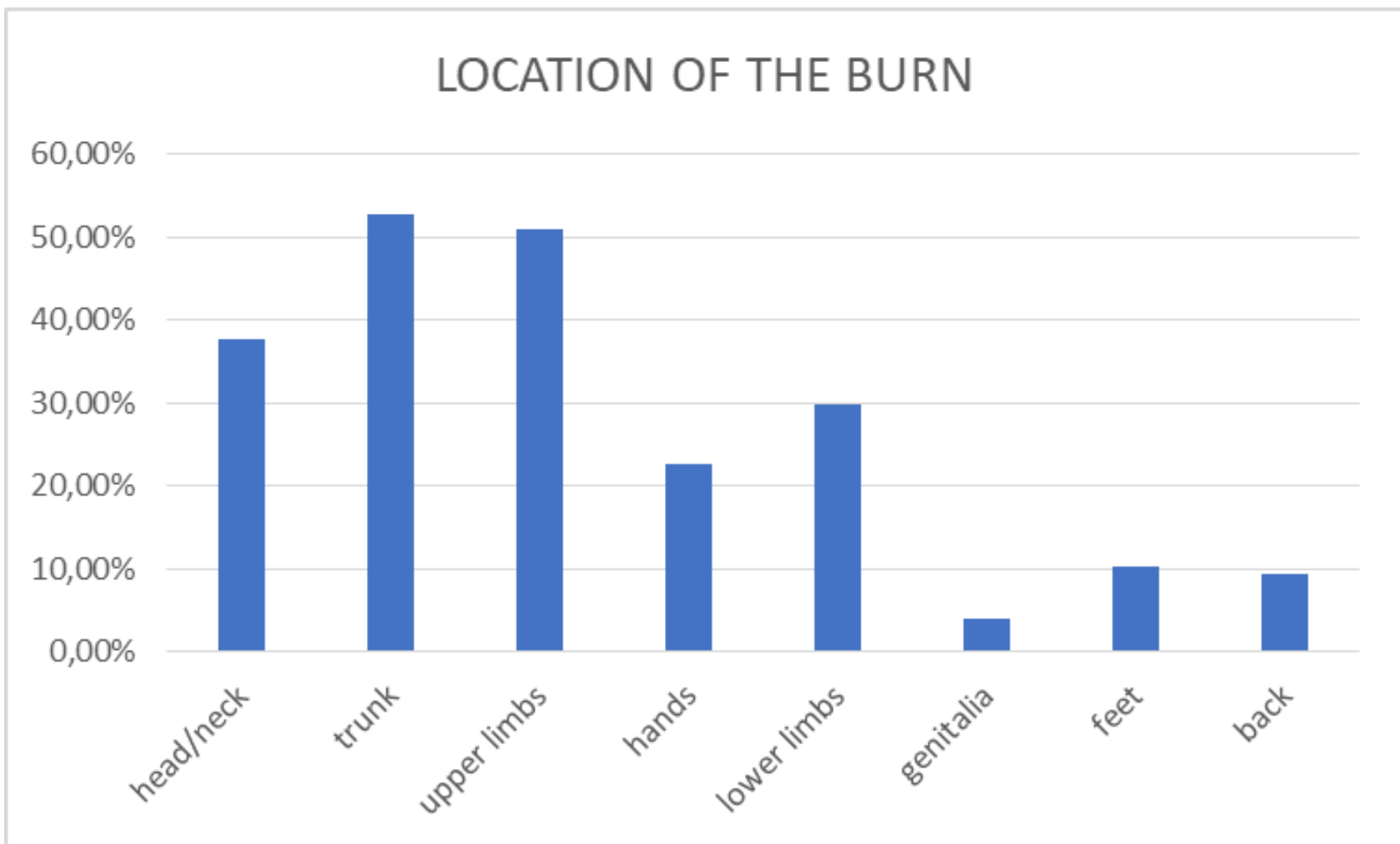
2604 children met the inclusion criteria, of which 34.3% came from rural regions.



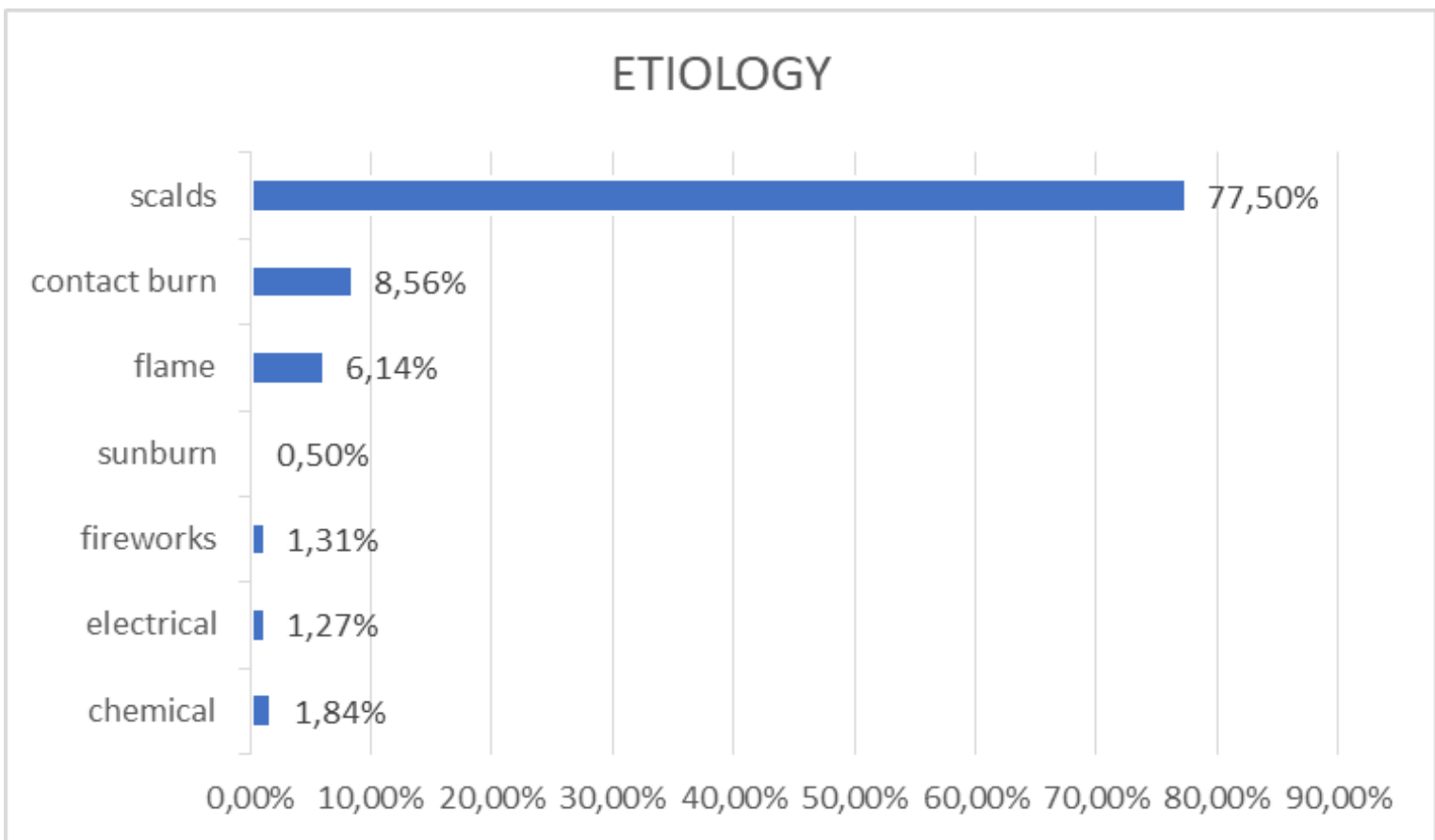
- Patients were transported to the specialized burn center using a number of modalities including 47.7 % by the ambulance, 16 % by air, and 28.3 % by private car.



- Only 82 % of children from the rural region were transported to the specialized burn center on the day of the injury. The remaining 18 % were transported the day after the injury. Surprisingly, similar percentages were seen from urban regions.
- Children from complete families (both parents present, living together) were transported to the burn center faster than children from single-parent families (P=0.002).



- Children from complete families were more often burned on trunk (P=0.005). Children from incomplete families were more burned on the genitals (P=0.001) and lower limbs (P=0.005).
- First aid (cooling with cold water after the burn) was more commonly performed for children from complete families (P<0.001).



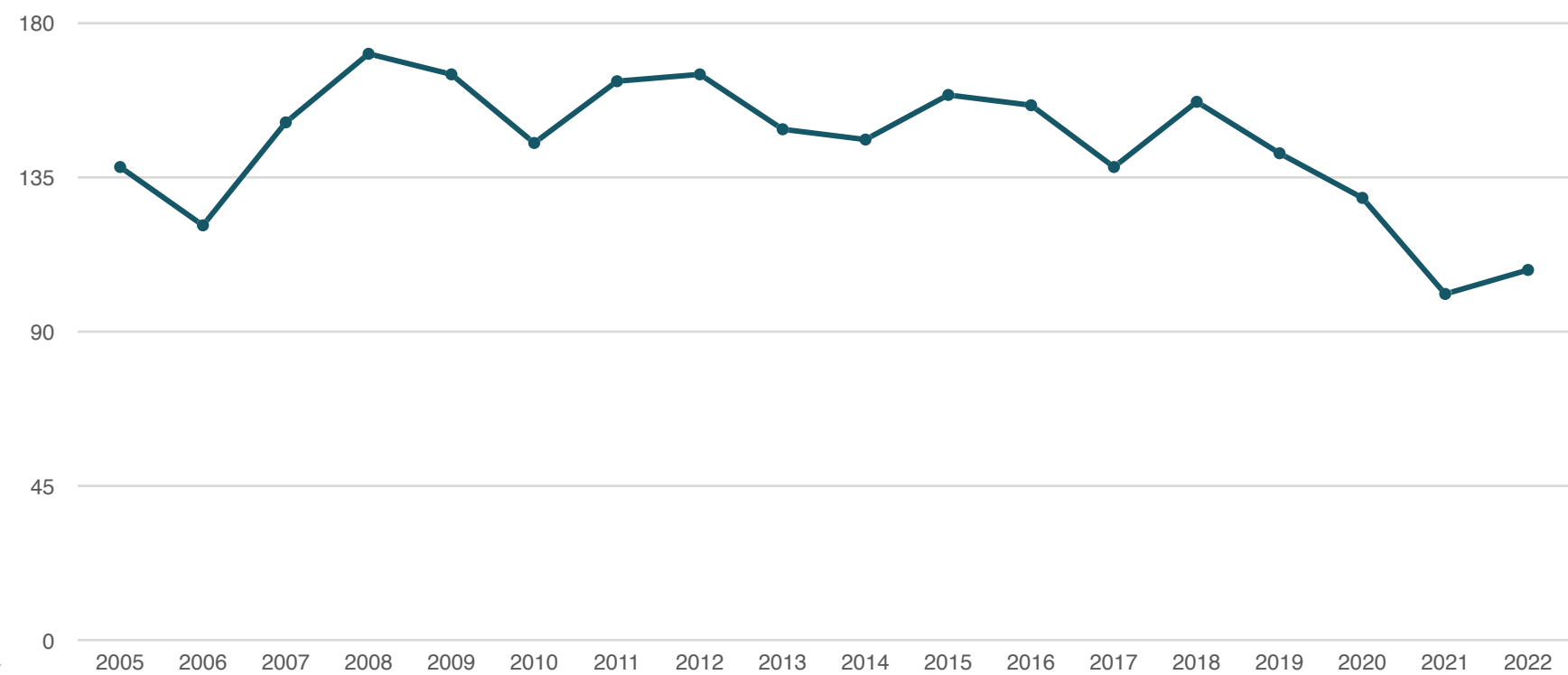
- Tea (P=0.009) burns are more common in children from complete families, and sunburn (P<0.001) was significantly greater in children from single-parent families.
- The probability that a child from a rural area will have a burn caused by a flame is 1.39 times higher than for children from urban regions. The probability that a child from an urban area will have a burn caused by electric current is 2.3 times higher than for children from a rural area.
- Boys were more likely to sustain burns in both populations (rural and urban).
- The mean age of rural child was 5.59 years (SD 13.139), urban child was 4.97 years (SD 10.08).

Average size of burned area : 6.18% TBSA

- During the reporting period, 14 children were admitted with burns over 50% TBSA
- TBSA ≤ 10% 1770 (83.99%)
- TBSA ≥ 10% 306 children (11.75%)
- TBSA ≥ 20 % 68 children (2.61%)
- TBSA ≥ 30% 29children (1.11%)

- The mean of total body surface area (TBSA) in rural child was 6.27 TBSA (SD 6.50) and urban child was 6.16 TBSA (SD 6.50).
- The home was the most common place for all burns to occur.

INCIDENCE OVER THE YEARS



CONCLUSION

Epidemiological studies on pediatric burns are crucial for healthcare planning and allow us to develop targeted prevention strategies to reduce the risk of burns and improve the care of pediatric patients. This information is also crucial to provide evidence for policymakers and healthcare professionals to guide decision-making and resource allocation.