

Postprocedural Complications Hospitalization Pattern Among Paediatric Patients at National Health Service Trusts: An Ecological Study in England and Wales

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Abstract: Purpose

To analyze the hospitalization patterns associated with postprocedural complications among the pediatric population in England and Wales over the past two decades.

Patients and Methods

This was an ecological study using hospital admission data extracted from the Hospital Episode Statistics database in England and the Patient Episode Database for Wales for the period between April 1999 and April 2020. Postprocedural complications related hospital admissions were identified using the 10th version of the International Statistical Classification of Diseases (ICD) system (D78, E89, H59, H95, J95, L76, M96, and N99).

Results

The rate of hospital admissions declined by 2.1% [from 8.32 (95% CI 7.75–8.88) per 100,000 persons in 1999 to 8.15 (95% CI 7.61–8.68) per 100,000 persons in 2020, $p>0.05$]. The primary reasons for hospital admissions associated with postprocedural complications were related to the respiratory system, genitourinary system, and ear and mastoid process, constituting 43.0%, 23.8%, and 23.0% of cases, respectively.

Conclusion

The trend of postprocedural complications among the pediatric population has been stable in the past two decades. Continuous monitoring of the hospitalization pattern for this type of complication is important due to advancements in healthcare provision and to improve patient care and safety. Future studies are needed to examine gender-based differences related to postprocedural complications and identify important preventable risk factors.