

Children with Febrile Seizures seen in Emergency Departments in Alberta

Rates per 10,000 population among children less than four years of age

Febrile seizures are convulsions brought on by a high fever and usually seen among infants and young children. Fever is typically related to an infection, such as a cold, influenza or ear infection, however, may also be occur following immunization. While febrile seizures typically end without intervention or long-term effects, they can be distressing to parents and result in acute care visits.

Febrile seizure events that present to emergency departments are coded using the International Classification of Diseases, 10th revision, Canadian Adaptation (ICD10-CA) diagnostic code R56. Studies suggest that approximately 50 per cent of febrile seizures will present to an emergency department (ED) for treatment.

Seizures are highest among one year olds

First febrile seizures among those under four years of age that present to ED in the past ten years show that the rate of first febrile seizures is highest among those between one and two years of age. While some year-to-year variation exists, one year olds consistently have the highest rate.

Although immunizations occasionally cause fever and subsequently febrile seizures, the risk after the vaccine is much less than if the child contracts the disease the vaccine protects against. For instance, the risk of febrile seizure after the measles-mumps-rubella-varicella (MMRV) vaccine is 6 seizures per 10,000 vaccine doses administered.¹ The risk for a child with measles disease is nearly 10 times higher, at 60-70 seizures per 10,000 children.²

1 MacDonald et al., Risk of febrile seizures after first dose of measles-mumps-rubella-varicella vaccine: population-based cohort study. *CMAJ* (in press)

2 Centers for Disease Control and Prevention. *Epidemiology and Prevention of Vaccine-Preventable Diseases*. Atkinson W, Wolfe S, Hamborsky J, eds. 12th ed., second printing. Washington DC: Public Health Foundation, 2012.

