Winnipeg Regional Health Authority / Office régional de la santé de Winnipeg — Caring for Health / À l'écoute de notre santé **PRIMARY CARE PRACTICE GUIDELINES**	**Practice Guideline:** *Emergency Management of Pediatric Febrile Seizure in the Primary Care Setting*	**Guideline Number** PCPG8
	Approved By: *Primary Care Management Team*	**Pages:** 1 of 6
	Approval Date: *Revised, July 2010*	**Supercedes:** *December 2009*

1. PRACTICE OUTCOME

To identify a pediatric febrile seizure in the primary care setting and to provide an emergency response based on best available evidence.

2. DEFINITIONS

A pediatric febrile seizure is defined as:
any seizure occurring in a child who is six months to five years of age accompanied by a current or recent fever (at least 38°C [100.4°F]) and without previous seizure or neurological events.

- Febrile seizures can be classified as simple or complex. Simple febrile seizures are characteristically generalized, usually last less than 15 minutes, and occur only once in a 24-hour period.
- Complex febrile seizures may have focal (partial seizure) features, last longer than 15 minutes, and recur within a 24-hour period.[1]

Status epilepticus is defined as

- an episode of more than thirty (30) minutes of continuous seizure activity, or
- two or more sequential seizures spanning this period without full recovery between seizures.

3. GUIDELINES

3.1 Assessment

3.1.1 Onset: Sudden, with rapid progression of symptoms.

3.1.2 Usual Causes:

- sudden spike in body temperature
- most occur during the first day of a fever
- may also develop as the fever is declining
- fevers are usually triggered by a viral or bacterial infection.[2]

There is an increased risk of febrile seizures:

- within 24 hours of receiving a diphtheria, tetanus and whole-cell pertussis vaccination (risk is reduced with DTaP vaccine)[3]
- within 14 days of receiving a measles, mumps and rubella vaccination[4]
- in children of a young age (less than 15 months) with frequent fevers, and having immediate family members with a history of febrile seizures.[5]

3.1.3 Signs and Symptoms of generalized seizure:
Tonic phase. Loss of consciousness occurs, along with deviation of eyes or nystagmus. The muscles suddenly contract and cause the person to fall down. A period of rigidity follows.
Clonic phase. The muscles go into rhythmic contractions, alternately flexing and relaxing. Convulsions usually last for less than two minutes.

Other signs and symptoms include:

- Breathing difficulty (e.g., apnea; the child may turn bluish in color)
- Contraction of the muscles of the face, limbs, and trunk
- Fever (usually higher than 102°F or 39°C)

- Illness (e.g., upper respiratory infection)
- Involuntary moaning, crying
- loss of bowel and bladder control

After seizure (post-ictal):

- unresponsiveness
- confusion
- fatigue/sleepiness
- severe headache.

3.2 Intervention

3.2.1 For generalized febrile seizures:

1. KEEP CALM AND REASSURE THE CHILD'S PARENT / GUARDIAN that the majority of febrile seizures are harmless (i.e., 96 – 98% of children who have experienced febrile seizures do not go on to develop epilepsy[6].
   (See "Parental Education" box below). Let seizure take its course. Do not try to stop the seizure or revive the person.
2. CHECK AIRWAY, BREATHING AND CIRCULATION. Ensure that the cause isn't asystole or a blocked airway. For a child over the age of one year, check the carotid pulse on the neck. In an infant under the age of one year, check the brachial pulse on the inner aspect of the upper arm.
3. ENSURE THAT OXYGEN AND SUCTION MACHINE ARE NEARBY for use if necessary.
4. PROTECT CHILD FROM FURTHER INJURY. Place a towel under the head, loosen tight clothing, and move sharp or hard objects out of the way.
5. ROLL THE CHILD ON HIS/HER SIDE as soon as possible to allow secretions to drain and to prevent aspiration. Suction oral cavity if necessary.
6. DO NOT PLACE CHILD IN A TUB OF COOLING WATER OR ADMINISTER TYLENOL MEDICATION (ORAL OR SUPPOSITORY) DURING SEIZURE. It has no positive effect on altering the course of the seizure.[7]
7. DO NOT RESTRAIN CHILD OR FORCE ANYTHING IN THE CHILD'S MOUTH. This could cause teeth or jaw damage.
8. CHECK VITAL SIGNS (including pulse oximetry if available) AND TIME THE DURATION OF SEIZURE. Record these data and your observations of the seizure activities.
9. PROTECT CHILD AFTER SEIZURE by providing a safe area to rest. As the child awakens, offer reassurance and reorientation.
10. PROVIDE HANDOUT ON FEBRILE SEIZURES INFORMATION TO PARENT / GUARDIAN.
11. Document the event, including physical assessment, interventions and client's response to treatment.

NOTE: Antipyretics and anti-epileptics have not been proven effective for prevention of simple febrile seizures.[8] However, acetaminophen or ibuprofen are considered to be safe and effective to reduce fever and may be given to the child as a comfort measure.[9]

WHEN TO CALL AN AMBULANCE:

- If the child has been injured
- If the seizure lasts longer than five (5) minutes, or repeats without full recovery (i.e., suspected status epilepticus).

3.2.2 Intervention for suspected status epilepticus:

1. CALL 911 IMMEDIATELY.
2. Initiate WRHA "General Emergency Protocol for Primary Care Setting".
3. ENSURE AIRWAY IS CLEAR AND PATENT.
   - Suction secretions as necessary.
   - Insert oropharyngeal airway.
   - Assist ventilation as needed by means of AmbuBag with oxygen.
4. GIVE OXYGEN 6-10 liters/minute by mask. Monitor oxygen saturation using pulse oximeter if available. Maintain oxygen saturation >97%.
5. ADMINISTER MEDICATION: Lorazepam sublingual tablet. If teeth are clenched, insert between gums and cheek.
   - Less than 6 months: 0.25 milligram tablet
   - 6 months to 2 years: 0.50 milligram tablet
   - More than 2 years: 1.0 milligram tablet

   NOTE: Lorazepam is to be to be administered in children only after 15 minutes of continuous seizure activity.[10]

   NOTE: These medications may cause respiratory depression, regardless of route of administration.
6. Consult with physician or RNEP for medication adjustment as required post event.
7. Document the event, including physical assessment, interventions and client's response to treatment.

4. EQUIPMENT/SUPPLIES REQUIRED

Oxygen
Pediatric Non-rebreather masks
Extra Oxygen tubing
Pediatric Oropharangeal airway
AmbuBag
Suction machine
Sphygmomanometer
Stethoscope
Glucometer
Lorazepam 1 milligram sublingual tablet
Oral Syringes, including tb syringes
Optional: pulse oximeter

5. RESOURCES/QUICK REFERENCE SHEET FOR PARENTAL EDUCATION

SEE "WRHA INFORMATION SHEET FOR PARENTS ON PEDIATRIC FEBRILE SEIZURES"

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