ARTICLE:
- **Citation:** Febrile Seizures: Guideline for the Neurodiagnostic Evaluation of the Child with a Simple Febrile Seizure, 2011.
- **Country:** USA
- **Funding Sources:** None reported

PURPOSE:
- **Research Question(s):** Clinical Practice Guideline to formulate evidence-based recommendations for health care professionals about the diagnosis and evaluation of a simple febrile seizure in infants and young children 6-60 months of age and revise the practice guideline published in 1996.

DESIGN:
- Review included a literature search for papers published since the last version of the guideline followed by convening a committee of pediatric neurologists, general pediatricians, epidemiology that constituted a subcommittee of the AAP Steering Committee on Quality Improvement and Management.

SETTING / SUBJECTS:
- A comprehensive review of the literature from 1996-2009 was conducted. In the original practice parameter, 203 articles were reviewed, in the current iteration, 372 additional studies were abstracted. Decisions were made on the basis of a systematic grading of the quality of evidence and strength of recommendations.

RESULTS:
- **Key Action Statements:**
  - A lumbar puncture should be performed on any child who presents with a seizure and a fever and has meningeal signs and symptoms (eg. Neck stiffness, Kernig and/or Brudzinski signs) or in any child whose history or examination suggest the presence of meningitis or intracranial infection Level B (overwhelming evidence from observational studies).
  - In any infant between 6-12 months of age who presents with a seizure and fever, a lumbar puncture is an option when the child is considered deficient in HIB or Prevnar (pneumococcal) vaccinations or when immunization status cannot be determined because of an increased risk of
bacterial meningitis Level D (expert opinion, case reports). This recommendation applies only to children 6-12 months of age because the subcommittee felt that clinicians would recognize symptoms of meningitis in children older than 12 months.

- A lumbar puncture is an option in the child who presents with a seizure and fever and is pretreated with antibiotics, because antibiotic treatment can mask the signs and symptoms of meningitis Level D (reasoning from clinical experience, case series).
- An EEG should not be performed in the evaluation of a neurologically healthy child with FSFS Level B (overwhelming evidence from observational studies).
- The following tests should not be performed routinely for the sole purpose of identifying the cause of FSFS: measurement of serum electrolytes, calcium, phosphorus, magnesium, blood glucose or CBC Level B (overwhelming evidence from observational studies).
- Neuroimaging should not be performed in the routine evaluation of the child with a simple febrile seizure Level B (overwhelming evidence from observational studies).

**IMPLICATIONS FOR PRACTICE:**
- This update to the 1996 guidelines is long overdue and is a much more rational approach to the workup of the first simple febrile seizure. PEM physicians have long questioned the need for LP routinely in cases of FSFS. The data suggest that the incidence of meningitis is low in this patient population and virtually all children with meningitis will have clinical indicators of CNS infection above and beyond their seizure. Pay attention to pretreatment and vaccine status as risk factors for meningitis. Work these kids up a little more aggressively than those who haven’t been pretreated or who are fully vaccinnated.

**LEVEL OF EVIDENCE / DECISION FOR USE:**
- Background Consider Replication x Ready for use

- Level of Evidence:
  - Ia Evidence obtained from meta-analysis of randomized controlled trials
  - Ib Evidence obtained from at least one RCT
  - **xIa** Evidence obtained from at least one well-designed controlled study without randomization
  - Iib Evidence obtained from at least one other type of well-designed quasi-experimental study
  - III Well-designed non-experimental studies
  - IV Expert committee reports, opinions of experts