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| **Maryland Next Gen NCLEX Test Bank Project****September 1, 2022** |
| **Case Study Topic**: (& Stand-alone trend) | Febrile Seizures | **Author:** | Mary Tiso RN, MS, CNLCommunity College of Baltimore County |

**Case Summary**

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| A parent of a 4-year-old pediatric client calls the telehealth nurse because the client has a temp of 104F and looks like she had a seizure. The telehealth RN provides triage and communicates with provider to offer in home management. Ultimately the child regains an acceptable level of consciousness and triage RN provides education for ongoing and future management. |

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| **Objectives** 1. Apply knowledge of pathophysiology related to febrile seizures2. Provide care for client who has had a seizure 3. Educate client about managing illness 4. Maintain optimal client temperature |

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| **Case Study Link** | **Case Study QR Code** |
| <https://umaryland.az1.qualtrics.com/jfe/form/SV_b8XdQw1VgICi1T0> |  |
| **Trend QR Code** | **Trend Link** |
|  | <https://umaryland.az1.qualtrics.com/jfe/form/SV_6S8rbUFblzN2zOu> |

**Case References**

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| 1. Leung, A. K., Hon, K. L., & Leung, T. N. (2018). Febrile seizures: an overview. *Drugs in context*, *7*, 212536. https://doi.org/10.7573/dic.212536
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**Case Study Question 1 of 6**

The telehealth nurse in an outpatient clinic receives a call from the parent of a 4- year- old child who may have had a seizure.

* Click to highlight the findings that are most significant

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| **Triage Nurses’ Notes** |
| 1230: Received phone call from parent of 4-year-old child who is concerned that the child may have experienced a seizure. Parent reports the child had a 12- hour history of runny nose, cough and fever. Temperature this morning was 104°F/40°C. She witnessed the child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length. |

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| **Triage Nurses’ Notes** |
| 1230: Received phone call from parent of 4-year-old child who is concerned that the child may have experienced a seizure. Parent reports the child had a 12- hour history of runny nose, cough and fever. Temperature this morning was 104°F/40°C. She witnessed the child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length. |

 **Scoring Rule: +/-**

**Rationale**: It is important to note that the child has what appears to be a typical illness, and not other more serious symptoms. The seizure symptoms including unresponsiveness, rigidity and shaking of limbs are typical for tonic clonic febrile seizure. Seizure length is important to note, seizures longer than 15 minutes are typically recommended for ER transfer.

**Case Study Question 2 of 6**

The telehealth nurse in an outpatient clinic receives a call from the parent of a 4- year- old child who may have had a seizure

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| **Triage Nurses’ Notes** |
| 1230: Received phone call from parent of 4-year-old child who is concerned that the child may have experienced a seizure. Parent reports the child had a 12- hour history of runny nose, cough and fever. Temperature this morning was 104°F/40°C. She witnessed the child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length. |

* Identify the top 4 priorities for the triage nurse to ask the parent and drag to the column on the right.

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| Client Findings | Top 4 Follow Up Assessments |
| Respiratory status\* |  |
| Birth history |  |
| Neurologic status\* |  |
| Developmental milestones |  |
| Medical history\* |  |
| Oral Intake |  |
| Child physical location and position\* |  |

**Scoring Rule: 0/1**

**Rationale:** The nurse needs to identify if the child is in immediate physical or physiologic danger. In a triage setting this is often completed by standard questions. The child’s birth history, intake and output and developmental status are not priorities. The nurse will need to know if the child has any underlying medical conditions or has received any medications recently.

**Case Study Question 3 of 6**

The telehealth nurse in an outpatient clinic receives a call from the parent of a 4- year- old child who may have had a seizure

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| **Triage Nurses’ Notes** |
| 1230: Received phone call from parent of 4-year-old child who is concerned that the child may have experienced a seizure. Parent reports the child had a 12- hour history of runny nose, cough and fever. Temperature this morning was 104°F/40°C. She witnessed the child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length.1235: Additional information obtained from parent is that the child has not taken any antipyretic medication in the last 24 hours. They did not think that the child hit their head or experienced and injury during the seizure. Reports that the child remains listless and minimally responsive and is lying on their side on the floor. Appears to be breathing normally, and lips are pink. Parent states that the child had a febrile seizure as a 2 year old but has not had seizures. Child is otherwise healthy with no known allergies. The only medication is a multivitamin. The child’s last weight was 36 lbs (16.4 kg). |

* Drag the most appropriate word from the choices to fill in the blank of the following sentence.

The top priority for the nurse to address is

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| Word Choices |
| Fluid and electrolyte status |
| Infection management |
| Level of consciousness\* |
| Respiratory status |
| Thermoregulation |

**Scoring Rule: 0/1**

Rationale: The child’s neurologic status remains impaired. Current respiratory status appears stable, and the infection and intake and output are not the highest priority.

**Case Study Question 4 of 6**

The telehealth nurse in an outpatient clinic receives a call from the parent of a 4- year- old child who may have had a seizure

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| **Triage Nurses’ Notes** |
| 1230: Received phone call from parent of 4-year-old child who is concerned that the child may have experienced a seizure. Parent reports the child had a 12- hour history of runny nose, cough and fever. Temperature this morning was 104°F/40°C. She witnessed the child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length.1235: Additional information obtained from parent is that the child has not taken any antipyretic medication in the last 24 hours. They did not think that the child hit their head or experienced and injury during the seizure. Reports that the child remains listless and minimally responsive and is lying on their side on the floor. Appears to be breathing normally, and lips are pink. Parent states that the child had a febrile seizure as a 2 year old but has not had seizures. Child is otherwise healthy with no known allergies. The only medication is a multivitamin. The child’s last weight was 36 lbs (16.4 kg).1240: Parent reports that child did open eyes but with minimal movement and remains very lethargic. Respiratory status remains stable. Parent checked axillary temperature and it is 39.5°C/103.1°F. Healthcare provider notified and diagnosed the client with a febrile seizure. |

The client is diagnosed with a febrile seizure.

* For each potential intervention, click to specify whether the order is appropriate or not appropriate to include in the plan of care.

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| Potential Intervention | Appropriate  | Not appropriate  |
| Cool bath |  | X |
| Acetaminophen prescription | X |  |
| Continue side lying position | X |  |
| Neurology referral |  | X |
| Follow-up head MRI |  | X |
| Antiepileptic prescription |  | X |
| Antibiotic prescription |  | X |
| Outpatient physician follow up | X |  |

**Scoring Rule: 0/1**

**Rationale:** It is expected for a child to remain lethargic post seizure. While very lethargic, no oral medications or fluids should be attempted. Fever is best managed with an antipyretic, and rectal route if available is best for the neurologically altered child. A cool bath is never indicated for fever management. At this point, MRI, antiepileptic and antibiotic are not indicated. The nurse should instruct the parent to maintain safe positioning while the child is altered, and schedule to see the physician as soon as possible.

**Case Study Question 5 of 6**

The telehealth nurse in an outpatient clinic receives a call from the parent of a 4- year- old child who may have had a seizure.

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| **Triage Nurses’ Notes** |
| 1230: Received phone call from parent of 4-year-old child who is concerned that the child may have experienced a seizure. Parent reports the child had a 12- hour history of runny nose, cough and fever. Temperature this morning was 104°F/40°C. She witnessed the child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length.1235: Additional information obtained from parent is that the child has not taken any antipyretic medication in the last 24 hours. They did not think that the child hit their head or experienced and injury during the seizure. Reports that the child remains listless and minimally responsive and is lying on their side on the floor. Appears to be breathing normally, and lips are pink. Parent states that the child had a febrile seizure as a 2 year old but has not had seizures. Child is otherwise healthy with no known allergies. The only medication is a multivitamin. The child’s last weight was 36 lbs (16.4 kg).1240: Parent reports that child did open eyes but with minimal movement and remains very lethargic. Respiratory status remains stable. Parent checked axillary temperature and it is 39.5°C/103.1°F. Healthcare provider notified and diagnosed the client with a febrile seizure. |
| **Orders** |
| 1. Administer acetaminophen 10-15 mg/kg (164-246 mg) every 6 hours orally or rectally for fever2. Administer ibuprofen 6-10 mg/kg (98 – 164 mg) every 6-8 hours orally for fever |

The provider enters orders.

* What should the nurse teach the client about the treatment plan? Select all that apply.

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| * We would expect to see slowly improving alertness over the coming hours\*
 |
| * The child will likely need antiseizure medications for the rest of her childhood
 |
| * It will be important to follow up with the primary care physician as soon as possible\*
 |
| * Rectal acetaminophen is a safe medication and route for a lethargic child\*
 |
| * It is ok to leave the child alone as she will likely be sleepy for a while
 |
| * A 120 mg acetaminophen suppository is an appropriate dose based on the physician order.
 |
| * The child remains at risk for future febrile seizures\*
 |
| * It is best to bundle a child in warm blankets and clothes if they have fever with chills
 |

**Scoring Rule: +/-**

**Rationale:** The nurse should convey importance of safety/continued monitoring of the child’s condition, appropriate fever management and follow up as needed. Febrile seizures are not contagious although the underlying illness causing the fever could be contagious. Febrile seizures typically resolve in early childhood and do not require ongoing medical management. 120 mg of acetaminophen is subtherapeutic for the child’s weight.

**Case Study Question 6 of 6**

The telehealth nurse in an outpatient clinic receives a call from the parent of a 4- year- old child who may have had a seizure.

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| **Triage Nurses’ Notes** |
| 1230: Received phone call from parent of 4-year-old child who is concerned that the child may have experienced a seizure. Parent reports the child had a 12- hour history of runny nose, cough and fever. Temperature this morning was 104°F/40°C. She witnessed the child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length.1235: Additional information obtained from parent is that the child has not taken any antipyretic medication in the last 24 hours. They did not think that the child hit their head or experienced and injury during the seizure. Reports that the child remains listless and minimally responsive and is lying on their side on the floor. Appears to be breathing normally, and lips are pink. Parent states that the child had a febrile seizure as a 2 year old but has not had seizures. Child is otherwise healthy with no known allergies. The only medication is a multivitamin. The child’s last weight was 36 lbs (16.4 kg).1240: Parent reports that child did open eyes but with minimal movement and remains very lethargic. Respiratory status remains stable. Parent checked axillary temperature and it is 39.5°C/103.1°F. Healthcare provider notified and diagnosed the client with a febrile seizure.1250: Provided education on febrile seizures and treatment plan. Per parent, child is more awake and alert and is nodding yes and no appropriately. Parent was able to administer acetaminophen 240 mg rectally. |
| **Orders** |
| 1. Administer acetaminophen 10-15 mg/kg (164-246 mg) every 6 hours orally or rectally for fever2. Administer ibuprofen 6-10 mg/kg (98 – 164 mg) every 6-8 hours orally for fever |

The nurse provides education on febrile seizures and treatment plan.

* For each client statement, click to specify whether the statement indicates an understanding, or no understanding of teaching provided.

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| Statement | Understanding | No understanding |
| I should plan to monitor my child’s temperature and level of consciousness closely while she remains sick | X |  |
| I should plan to administer acetaminophen rectally if my child is awake and alert |  | X |
| My child will need ongoing seizure medications |  | X |
| Febrile seizures are most common in teenagers 13-18 years of age |  | X |
| My child likely experienced a febrile seizure and should fully recover | X |  |
| My child will likely experience a seizure every time she has a fever |  | X |

**Scoring Rule: 0/1**

**Rationale**: The child with a febrile seizure may need closer monitoring while ill or potentially febrile as one febrile seizure can be predictive of future febrile seizures. Children typically experience febrile seizures as infants or young children (1-4 years old) and outgrow febrile seizures with no remaining deficits or neurologic issues and do not need chronic antiepileptics. Rectal acetaminophen is not necessary for the child who is able to take oral medications but may be needed for the child who is neurologically impaired or lethargic.

**Trend**

The telehealth nurse in an outpatient clinic receives a call from the parent of a 4- year- old child who may have had a seizure.

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| **Triage Nurses’ Notes** |
| 1230 PM: Received phone call from parent of 4 year old child who is concerned that the child may have experienced a seizure. Parent reports the child had 12 hour history of mild runny nose and cough as well as fever. She witnessed child become unresponsive while sitting in a chair. Child then had rigidity and shaking of arms and legs. Parent is unclear on exact length of seizure but estimates 4-5 minutes in length.1235: Upon questioning, Parent states that they have not administered any antipyretics in the last 24 hours but the child’s temperature this morning was Temperature this morning was 104°F/40°C. Child did not experience any injury during seizure including head strike. Child remains listless and minimally responsive and is laying on the floor side lying. Parent states that child is breathing normally, and lips appear pink. Child has no allergies. Parent does state that child had a febrile seizure as a 2 year old but has not had seizures since that time and is not on any chronic medication other than multivitamin.1240: Per parent, child did open eyes but with minimal movement and remains very lethargic. Respiratory status remains stable. Parent checked axillary temperature and it is 39.5°C/103.1°F. Healthcare provider notified and diagnosed the client with a febrile seizure.1250: Provided education on febrile seizures and treatment plan. Per parent, child is more awake and alert and is nodding yes and no appropriately. Parent was able to administer acetaminophen 240 mg rectally. |
| **Orders** |
| 1. Administer acetaminophen 10-15 mg/kg every 6 hours orally or rectally for fever2. Administer ibuprofen 6-10 mg/kg every 6-8 hours orally for fever |

* Complete the following sentence by choosing from the list of options.

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| --- | --- |
| The nurse determines the client’s status is  | Select |
| improving\* |
| deteriorating  |
| unchanged |
| The nurse should now instruct the parent to | take the child to the ER |
| give an additional dose of acetaminophen |
| continue to monitor the child at home\* |

**Scoring Rule: 0/1**

**Rationale:** Improved mental status indicates that the child is recovering. The child will not need seizure medications as febrile seizures typically do not warrant antiepileptics and further antipyretics should not be administered prior to 6 hours from previous dose.