Ambulatory Care Shared Governance Pediatric Temperature Taking EBQI Project

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Background
Ambulatory Care Nurses raised questions about the most accurate methods for pediatric temperature taking (e.g., oral, rectal, tympanic, and temporal temperatures):
• What is the most accurate route?
• Can less invasive routes be used for non-fever related visits?
• Is a core (rectal) temperature required for well child visits?

Clinical Question
What is the best route for pediatric temperature taking in an Ambulatory Care setting (by age group) for a well child exam, illness, or injury visit?

Approach
• Iowa Model Revised1 was used by an Ambulatory Care Shared Governance subcommittee to look into this issue.
• Team members reviewed current AAH policies and procedures.
• Ambulatory Care RNs and MAs (N=598) completed an electronic survey via Survey Monkey to determine current practices and equipment used for temperature taking.
• A literature search was conducted by the AAH librarian and review conducted by a AAH nurse scientist.

Staff Survey Findings (N=598)

<table>
<thead>
<tr>
<th>Route</th>
<th>Most Common</th>
<th>0 - 3 months</th>
<th>4 - 6 months</th>
<th>7 - 12 months</th>
<th>1 - 2 years</th>
<th>3 - 5 years</th>
<th>&gt; 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Child Visit</td>
<td>Axillary</td>
<td>35%</td>
<td>35%</td>
<td>36%</td>
<td>40%</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Temporal</td>
<td>24%</td>
<td>24%</td>
<td>25%</td>
<td>25%</td>
<td>26%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Rectal</td>
<td>31%</td>
<td>31%</td>
<td>30%</td>
<td>30%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Injury No Fever Visit</td>
<td>Axillary</td>
<td>48%</td>
<td>48%</td>
<td>47%</td>
<td>47%</td>
<td>42%</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td>Rectal</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Fever Related Visit</td>
<td>Rectal</td>
<td>76%</td>
<td>76%</td>
<td>77%</td>
<td>77%</td>
<td>77%</td>
<td>77%</td>
</tr>
</tbody>
</table>

Figure 1. Ranking of temperature taking reported by route and type of visit

Review of Policies & the Evidence
• Lippincott2 procedures did not include route recommendations based upon age or reason for visit.
• A literature search revealed 16 articles for review.
• The literature review indicated rectal temperatures take time, can be inaccurate, may cause injury and are distressing to parents and children.3
• The American Academy of Pediatrics4 and Society of Pediatric Nurses5 indicate the temporal route is reliable for screening <3 months and recommend a core body temperature (rectal) for infants <3 months.
• Screening temperatures are indicated when a core temperature is not required.6
• The recommendations do not require a core body temperature for well child visits or injury with no suspected fever visits.4,5
• Not all routes are equal to measure core body temperature. Temporal and tympanic routes are comparable.7 Majority of staff use route based upon presentation.
• The least reliable method is the axillary route.8
• Not all clinics have the equipment required for temporal and tympanic temperature taking (survey finding).
• Not all team members were trained in the proper use of all routes (survey finding).

Table 1: Pediatric Temperature Taking Recommendations for Practice Change

- Proper technique must be used for all modes to ensure an accurate temperature.
- Ideal temperature-measurement technique should be safe, easy, noninvasive, cost effective, and time efficient, and should precisely reflect core body temperature.
- A distinction should be made between the need for a core body temperature (rectal) and a screening temperature.
- A screening temperature is indicated when illness or fever is not suspected.
- An elevation in a screening temperature should be followed by a core temperature.
- Core temperatures are necessary when a child is presenting with a fever or a fever is suspected.

References
6. Screening temperatures are indicated when a core temperature is not required.4
7. Not all routes are equal to measure core body temperature. Temporal and tympanic routes are comparable.4 Majority of staff use route based upon presentation.
8. The least reliable method is the axillary route.8

Implications for Practice
These recommendations are pending system pediatric policy review.

Conclusions

Acknowledgements
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