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9-7-2018

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#### Recommended Citation

Dowd, M. D. Shared Decision-Making Tools in Pediatric Acute Care: Enhancing Parent Knowledge and Trust. *JAMA Netw Open* 1, 182410-182410 (2018).

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# Shared Decision-Making Tools in Pediatric Acute Care Enhancing Parent Knowledge and Trust

M. Denise Dowd, MD, MPH

Every clinician who provides acute care to a child presenting with a minor head injury that is neurologically normal and possibly having had a brief loss of consciousness can relate to the question, should we get head computed tomography (CT)? We consider a handful of factors to be associated with clinically important traumatic brain injury (ciTBI). They include presence and quantity of vomiting, severe headache, concern for nonaccidental trauma, presence of other injuries, and severity of the injury mechanism. Given that none of these risk factors are present, a final question remains: what do the parents want? The Pediatric Emergency Care Research Network (PECARN) head injury guidelines have helped considerably in structuring and standardizing risk assessment. These evidence-based guidelines divide minor head injuries into low, intermediate, and high risk of ciTBI and establish 2 prediction rules, 1 for children younger than 2 years and 1 for those 2 years and older.<sup>1</sup> The PECARN head injury guidelines, when implemented consistently via integration as decision guidance into ordering systems, have led to a safe decrease in head CT use.<sup>2</sup> The guidelines suggest an option for those in the intermediate-risk group, head CT, or observation. The choice includes consideration of parental preference as a decision factor. A parent's preference for whether their child receives a head CT is shaped by many factors including past experience, knowledge, anxiety, and trust in their child's health care clinician. The content and quality of the communication between the parent and the clinician is intimately tied to these factors. The PECARN guidelines do not assist in determining what that preference is, so clinicians approach this determination in a variety of ways.

Hess and colleagues<sup>3</sup> demonstrate the potential helpfulness of a practical communication tool for engaging parents in the decision whether to obtain a head CT in children with mild head trauma. This Patient Centered Outcomes Research Institute–funded, multicenter, cluster trial randomized emergency clinicians caring for children in the PECARN intermediate-risk head injury group to either a shared decision-making (SDM) group using a decision aid or a usual care group. Parent's knowledge of their child's risk of a ciTBI and diagnostic options was measured as the primary outcome. Several secondary outcomes were measured, including head CT rate, missed injuries, decisional conflict, trust in clinician, and subsequent health care utilization. Compared with usual care, parents in the decision aid arm had greater knowledge, less decisional conflict, and were more involved in decision making than those in the usual care arm. Of note, the intervention group also endorsed greater trust in their clinicians. While the head CT rate did not differ between the 2 groups, there was less health care utilization (including other imaging) in the week following the initial visit. A majority of clinicians using the tool would recommend it to other clinicians. These findings are similar, in general, to a published meta-analysis of SDM tools in clinical practice.<sup>4</sup>

Shared decision making, a topic which has appeared in the medical literature for several decades, has more recently gained federal policy makers' attention as it offers the possibility of reducing costs while increasing quality for what are termed high-cost, preference-sensitive conditions. Most trials of SDM tools and approaches have been performed in adult health care settings with chronic care management. Little is known about SDM and associated tools in the child health care setting. References to SDM in pediatrics sharply increased in 2010 and yet the method remains poorly defined and trials are lacking.<sup>4</sup> Compared with adult health care, pediatric care is unique in ways directly relevant to SDM. Parents serve as surrogate decision makers for their children. Clinicians of pediatric have an obligation to protect children, including from parental

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decisions which place those children in harm's way. Additionally, when children are of the age of assent, they may be giving input into decision making along with their parents. Very little is known about how these unique pediatric features influence SDM.

The study did not demonstrate a reduction in head CT rate acutely, which could be explained by the fact participating sites were already using the PECARN guidelines prior to the study. Use of the decision aid in sites not using the guidelines might demonstrate a different association with physician ordering of head CTs. Two findings in this study raise a question about what might be considered the most meaningful impact of SDM tools in acute care settings accustomed to using guidelines—reduction of subsequent medical visits and diagnostics and increase in trust. These 2 related outcomes are likely proxies for satisfaction with care, a performance metric that today's emergency physicians are rapidly becoming familiar with.

The decision aid tool in the study by Hess and colleagues<sup>3</sup> did not include specifics or quantification of the risk of head CT radiation. Parents typically desire some statement of type and magnitude of this risk and frequently clinicians mention this risk in conversation with families. As evidence of the harmful effects of pediatric head CT scans grows,<sup>5</sup> clinicians will find it necessary to communicate a more clear statement of risk and SDM tools will need to be refined accordingly. The study raises a number of questions around use of SDM tools—what is the impact of racial and ethnic discordance between patient and clinician? What is the influence of parental educational level and socioeconomic status? Should the clinicians who use SDM tools be trained on how to use them and what should that training consist of? What is the impact on physician productivity, as measured by work relative value units? What is the impact on department flow?

There are other preference-sensitive conditions in pediatric acute care that might benefit from SDM tools. Examples include watchful waiting vs initiation of antibiotics for otitis media and watchful waiting vs imaging for abdominal pain with low appendicitis risk score. While many questions remain on the use of SDM tools in pediatric acute care settings, tools which have the potential to support accurate and complete communication and engage parents in decision making in busy emergency departments are more than welcome. This is especially true when benefits include decreased health care utilization, patients' increased trust of clinicians, and clinicians' satisfaction with the tool.

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## ARTICLE INFORMATION

**Published:** September 21, 2018. doi:[10.1001/jamanetworkopen.2018.2410](https://doi.org/10.1001/jamanetworkopen.2018.2410)

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**Conflict of Interest Disclosures:** None reported.

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