META: A Novel Method for Evaluating Pediatric Scoring Systems for Implementation

Sam Stubblefield, MD

As we move toward increased evidence-based and value-based care, health care systems place growing emphasis on using standardized protocols and pathways. Many of these pathways rely on various clinical scoring systems. As these scores have proliferated, it becomes increasingly challenging to determine which of these scoring systems to implement in your health care system. We propose a novel method for determining which scores to implement.

Clinical scores are applied throughout our lives, beginning immediately after birth with the Apgar score[1] and concluding with the FOUR score,[2] which is used to predict imminent brain death. If an infant develops croup, we have 2 scores.[3,4] If it is actually bronchiolitis, we have plenty more,[5,6] although none of them work well.[7] If the child progresses to asthma, we have yet more,[8,9] although most of these are variants of the ASS (Asthma Severity Score) and are not good either.[10] If none of these are suitable, we have over 35 other published respiratory scores to choose from.[11] If thinking about this gives you abdominal pain, the Alvarado[12] score will predict if you have appendicitis. If it makes you want to kick something, and you hurt your ankle or knee, the orthopedists in Ottawa created scores for those, too.[13,14] This is enough to make you want to bang your head against a wall. The good news is you have a choice of 3 scores for that (Pediatric Emergency Care Applied Research Network, Canadian Assessment of Tomography for Childhood Head injury, and Children's Head Injury Algorithm for prediction of Clinically Important Events).[15–17] Rendering yourself mercifully unconscious allows application of Teasdale and Jennett's[18] score but thankfully means you no longer need to think about it.

Given the multiplicity of clinical scoring options, and the anxiety and upset they can cause (especially among those with a high Anxiety Sensitivity Index[19] score), we propose a novel scoring system for scoring scoring systems: the meetings, electronic health record integration, time, and angst (META) score (see Table 1). After assigning values to each category in the META score, sum the values and refer to Table 2 for interpretation.

Our next steps will be to validate the META score in a variety of health care systems, although our local experience has revealed it to have excellent construct, content, and criterion validity and to serve as a highly reliable measure. It has not escaped our attention that a multitude of other methods for scoring evaluations are in development. These include the Healthcare-Engaged Acatamathesia-Deprecating Assessment of Clinical Health Evaluations (HEADACHE), the Normalized Ordinal Metric for Optimal Ranking of Evaluations (NOMORE), and the Adequacy of Automated Arithmetical Assessment, Augmented (AAAAA). Given the multiplicity of these instruments, we recommend further efforts add clarity by creating a scoring system to score scoring systems scoring systems.

Division of General Pediatrics, Nemours/ Alfred I. duPont Hospital for Children, Wilmington, Delaware and Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, Pennsylvania

TABLE 1 META Score Tool

Measure	Score		
	0	1	2
Meetings (no. required to ensure buy-in of all necessary stakeholders)	<25 (finite)	Each meeting leads to 1 additional meeting (infinite)	Each meeting leads to ≥2 additional meetings (larger infinity)
EHR integration	Delays workflows by ≥10 min per patient	Breaks 50%–95% of nursing and provider workflows	EHR vendor sets the server room on fire
Time to ≥50% user adoption	1 complete EHR upgrade cycle	2 practice generations of clinicians	3 fathoms of sea level rise
Angst equivalent	Is it wrong to brew coffee with caffeinated water?	I never should have become a pediatrician. Where's the number for that truck driving school?	Sixteen-year-old-at-the-prom

EHR, electronic health record.

TABLE 2 META Score Interpretation

META Score	Recommended Action
0–1	Consider only if implementation qualifies for ABP MOC part 4 credit
2–8	Do not implement

ABP MOC, American Board of Pediatrics Maintenance of Certification.

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