

the best interest of the child, taking into account the family's and the care team's assessment of the multiple factors of risk and risk tolerance, experience and comfort of monitoring an ill infant, and ease and accessibility of transportation. Academic medical centers and children's hospitals generally provide high-quality observation for ill infants, as do many community hospitals with dedicated pediatrics units. Many hospitals do not have nurses and staff with experience and skills caring for young infants, however. In the current health care system, insurance status and coverage may further affect the family's and care team's decision on location of monitoring.

Even with the availability of reliable data, thoughtful investigators and clinicians will have different thresholds for recommending diagnostic tests and therapeutic interventions. Of fundamental importance to guideline interpretation, this issue is discussed below.

RISK TOLERANCE: A NUMBER IS NOT A DECISION

Even with the availability of valid and reliable data, thoughtful investigators and clinicians will have different thresholds for recommending diagnostic tests and therapeutic interventions. The committee believes understanding risk tolerance is of fundamental importance to guideline interpretation. In a straightforward case of a febrile infant having CSF pleocytosis with a predominance of polymorphonuclear leukocytes and a positive Gram stain result, the committee would expect clinicians to unanimously agree the infant be hospitalized and receive immediate antimicrobial treatment. Similarly, on the basis of prevalences cited in KAS 1, 8, and 15, a risk for UTI can be estimated at 10%, which translates to a recommendation to perform 10 urinalyses to detect a

single UTI, or a number needed to test of 10. This is an example in which agreement to perform a urinalysis is expected. However, challenges frequently occur. For example, if clinical and laboratory evaluations suggest the likelihood of bacteremia 1:100 (number needed to treat = 100) or a risk of bacterial meningitis at 1:1000 (number needed to test = 1000), is it worth 100 doses of antibiotics to treat a single case of bacteremia while awaiting blood culture results? Should the committee recommend performing the number of LPs required to obtain 1000 samples of interpretable CSF to prevent a delay in recognizing and treating a single case of bacterial meningitis? Responses to these questions depend on how much risk is considered tolerable. The challenge in guideline development was succinctly stated as, "Thus, evidence alone never speaks for itself or conveys the truth because it always requires interpretation."⁷² In the committee's discussions, responses to the above questions and similar issues varied among and within the specialty groups constituting the committee and reviewers.

Differences in risk tolerance also exist between parents and physicians and may exist among family members. A clinician may estimate that an infant's risk of meningitis is 1% and an LP is indicated, whereas a parent may have a higher threshold for consenting to the procedure. These differences, along with other parent beliefs and values, provide further challenges in an effort to share decision-making in an acute setting.

CONSENSUS RECOMMENDATIONS

The recommendations in this guideline reflect universal agreement or a strong consensus among committee members. In the one situation when there was majority

but not consensus agreement, additional committee members were appointed and added; subsequently, consensus was achieved. The major reason for disagreement was varying levels of risk tolerance among committee members. For these recommendations, a more detailed explanation of the uncertainties involved and attempts to derive numbers needed to test and numbers needed to treat are provided in the specific Key Action Statements.

METHODOLOGY

The working group consisted of representatives from epidemiology; general pediatrics; pediatric subspecialties, including emergency medicine, infectious diseases, and hospital medicine; and family medicine. Individuals with expertise in guideline development, algorithm creation, and quality improvement were also included. During the development of this guideline, all members had access to the AHRQ evidence review,²⁶ the additional analyses by the committee epidemiologist (C.R.W. Jr.) as well as others, copies of all published literature cited in these reports, and the opportunity to participate in 4 meetings convened at the AAP and on conference calls. The authoring group relied on data and analyses from the following: (1) a formal analysis and systematic review of published articles from the United States and selected international countries that was conducted by an Evidence-Based Practice Center under contract to AHRQ; (2) a supplemental review and analyses were performed by the epidemiologist assigned to the committee; (3) consistent with a previous AAP guideline⁷³ if literature gaps existed, data were solicited and received from authors of previously published, peer-reviewed articles who performed additional analyses from their investigations: Kaiser Permanente