

TABLE 2 Key Action Statement 1A

Aggregate Evidence Quality	Grade A
Benefits	More physiologic fluid, less hyponatremia
Risks, harm, cost	Potential harms of hypernatremia, fluid overload, hypertension, hyperchloremic metabolic acidosis, and acute kidney injury have not been found to be of increased risk with isotonic maintenance fluids.
Benefit-harm assessment	Decreased risk of hyponatremia
Intentional vagueness	None
Role of patient preferences	None
Exclusions	Patients with neurosurgical disorders, congenital or acquired cardiac disease, hepatic disease, cancer, renal dysfunction, diabetes insipidus, voluminous watery diarrhea, or severe burns; neonates who are <28 d old or in the NICU; or adolescents >18 y old
Strength	Strong recommendation
Key references	9-33-39-42

teams through a series of questions that are intended to create clear, transparent, and actionable Key Action Statements.⁴⁷ The committee was actively involved while the software was used and solicited the inputs of this program, which included strength of evidence and balance of benefits versus harms, and chose which sentences recommended by the program to use as part of the guideline. Bridge-Wiz also integrates the quality of available evidence and a benefit-harm assessment into the final determination of the strength

of each recommendation per the guidance in Fig 1.

Before formal approval by the AAP, this guideline underwent a comprehensive review by stakeholders, including AAP councils, committees, and sections; selected outside stakeholder organizations; and individuals who were identified by the subcommittee as experts in the field. All comments were reviewed by the subcommittee and incorporated into the final guideline when appropriate.

On the basis of the reviewed literature, this guideline applies to children 28 days to 18 years of age in surgical (postoperative) and medical acute-care settings, including critical care and the general inpatient ward. This guideline DOES NOT apply to children with neurosurgical disorders, congenital or acquired cardiac disease, hepatic disease, cancer, renal dysfunction, diabetes insipidus, voluminous watery diarrhea, or severe burns; neonates who are younger than 28 days old or in the NICU; or adolescents older than 18 years old because the majority of the researchers in the prospective studies reviewed in this guideline excluded these subsets of patients or did not include patients with these specific high-risk diagnoses.

RESULTS

Key Action Statement

The Key Action Statement is as follows:

1. Composition of Maintenance IVFs

1A: The AAP recommends that patients 28 days to 18 years of age requiring maintenance IVFs should receive isotonic solutions with appropriate potassium chloride (KCl) and dextrose because they significantly decrease the risk of developing hyponatremia (evidence quality: A; recommendation strength: strong; Table 2).

Aggregate Evidence Quality	Benefit or Harm Predominates	Benefit and Harm Balanced
Level A Intervention: well designed and conducted trials, meta-analyses on applicable populations Diagnosis: independent gold standard studies of applicable populations	Strong recommendation	Weak recommendation (based on balance of benefit and harm)
Level B Trials or diagnostic studies within minor limitations; consistent findings in from multiple observational studies	Moderate recommendation	
Level C Single or few observational studies or multiple studies with inconsistent findings or major limitations	Weak recommendation (based on low quality evidence)	No recommendation may be made
Level D Expert opinion, case reports, reasoning from first principles		
Level X Exceptional situations in which validating studies cannot be performed, and there is a clear preponderance of benefit or harm	Strong recommendation Moderate recommendation	

FIGURE 1

AAP rating of evidence and recommendations.