During a Grand Rounds presentation a couple years ago at The University of Chicago’s Comer Children’s Hospital on understanding and using big data in the pediatric intensive care unit, Dr. L. Nelson Sanchez-Pinto, who was a pediatric intensivist at the hospital at the time, mentioned a book by Daniel Kahneman entitled Thinking Fast and Slow. The basic principles involve the idea that people think using two systems: System 1, an automatic FAST system with a quick response to a question that generates patterns of ideas based on innate skills and experience, such as clinical impression or judgment; and System 2, a SLOW system that provides the ability to work through an effortful, complex series of thoughts and computations that require attention, such as gathering further clinical data toward a working clinical diagnosis.1

In the practice of medicine, especially when caring for infants and children who are acutely ill, we use System 1 frequently in the emergency department, intensive care unit, and sometimes in the clinic or office. I learned and still tend to think that “airway, breathing, and circulation” in children as a respiratory event is the most common cause of an out-of-hospital arrest; however, we are now learning in practice that it should be cardiac, airway, and breathing.2 When using System 1, as described by Kahneman,1 in our initial management, patients are stabilized, we gather more history, conduct serial physical examinations, and assess initial laboratory results (ie, blood gases, electrolytes, glucose, calcium, magnesium). System 2 enables us to further analyze and synthesize the clinical information we have requested and possibly revise our working diagnosis and management. System 1 thinking gets us started, but System 2 thinking is every bit as important in the formulation of our working diagnosis and management. I thank Dr. Sanchez-Pinto for his reference to Kahneman’s book, and even though this approach is primarily designed for work in the economic sciences, it is relevant to how we think in clinical medicine. In addition, Dr. Sanchez-Pinto uses the discussion of the two systems in his teaching and examines them in a recent review about big data in the critical care unit.3 The more I have learned about System 1 and System 2, the more I think it applies to everyday thinking in our own lives.

REFERENCES