

safety problem. In the past, diagnostic errors tended to be viewed as a failure of individual clinicians. The modern view is that they are mostly a system of care deficiencies. Current estimates suggest that nearly everyone will experience at least one diagnostic error in their lifetime, leading to mortality, morbidity, unnecessary tests and procedures, costs, and anxiety.

Solutions to the “diagnostic errors as a system of care” problem have focused on system-level approaches, such as decision support and other tools integrated into EHRs. The use of checklists has been proposed as a means of reducing some of the cognitive errors discussed earlier in the chapter, such as premature closure. While checklists have been shown to be useful in certain medical contexts, such as operating rooms and intensive care units, their value in preventing diagnostic errors that lead to patient adverse events remains to be shown.

EVIDENCE-BASED MEDICINE

Clinical medicine is defined traditionally as a practice combining medical knowledge (including scientific evidence), intuition, and judgment in the care of patients ([Chap. 1](#)). Evidence-based medicine (EBM) updates this construct by placing much greater emphasis on the processes by which clinicians gain knowledge of the most up-to-date and relevant clinical research to determine for themselves whether medical interventions alter the disease course and improve the length or quality of life. The phrase “evidence-based medicine” is now used so often and in so many different contexts that many practitioners are unaware of its original meaning. The intention of the EBM program, as described in the early 1990s by its founding proponents at McMaster University, becomes clearer through an examination of its four key steps:

1. Formulating the management question to be answered
2. Searching the literature and online databases for applicable research data
3. Appraising the evidence gathered with regard to its validity and relevance