

## Pat Croskeny's Biases & Cognitive De-biasing Strategies to Reduce Diagnostic Error

<b>Strategy</b>	<b>Mechanism/Action</b>
Develop insight/awareness	Provide detailed descriptions & thorough characterizations of known CDRs & ADRs together with multiple clinical examples illustrating their adverse effects on decision making & diagnosis formulation.
Consider alternatives	Establish forced consideration of alternative possibilities, e.g., the generation & working through of a differential diagnosis. Encourage routinely asking the question: what else might this be?
Heighten metacognition	Train for a reflective approach to problem-solving: stepping back from the immediate problem to examine & reflect on the thinking & affective processes.
Develop cognitive forcing	Develop generic & specific strategies to avoid predictable CDRs & ADRs in particular strategies clinical situations.
Provide specific training	Identify specific flaws & biases in thinking & provide directed training to overcome them: e.g., instruction in fundamental rules of probability, distinguishing correlation from causation, basic Bayesian probability theory.
Provide simulation training	Develop mental rehearsal, "cognitive walkthrough" strategies for specific clinical scenarios to allow CDRs & ADRs to be made & their consequences to be observed. Construct new scenarios or clinical training videos contrasting incorrect (biased) approaches with the correct (de-biased) approach.
Decrease reliance on memory	Improve the accuracy of judgments through cognitive aids: mnemonics, clinical practice guidelines, algorithms, & hand-held computers.
Make task easier	Provide more information about the specific problem to reduce task difficulty & ambiguity. Make available rapid access to concise, clear, well-organized information.
Minimize time pressures	Provide adequate time for quality decision-making.
Establish accountability	Establish clear accountability & follow-up for decisions made.
Improve feedback	Provide as rapid & reliable feedback as possible to decision makers so that errors are immediately appreciated, understood, & corrected, resulting in better calibration of decision makers.

P. Croskeny Diagnostic Failure: A Cognitive & Affective Approach from Advances in Patient Safety: From Research to Implementation.  
<https://www.ncbi.nlm.nih.gov/books/NBK20487/>