Common Cognitive Biases Encountered in Healthcare Settings

Framing effect: Reacting to a particular choice differently depending on how the information is presented to you.

Anchoring bias: The tendency to rely too heavily, or "anchor", on one trait or piece of information when making decisions (usually the first piece of information acquired on that subject).

Availability bias: More recent and readily available answers and solutions are preferentially favored because of ease of recall and incorrectly perceived importance

Base rate neglect: This occurs in medicine when the underlying incident rates of conditions or population-based knowledge are ignored as if they do not apply to the patient in question (i.e. exercise stress test in a young woman prompting an angiogram. The 'base rate' is so low in this population that this result is more likely false positive than true positive).

Confirmation bias: Diagnosticians tend to interpret the information gained during a consultation to fit their preconceived diagnosis, rather than the converse

Overconfidence: An inflated opinion of their diagnostic ability leading to subsequent error. Their confidence in their judgements does not align with the accuracy of these judgements.

Search satisfying: Ceasing to look for further information or alternative answers when the first plausible solution is found.

Diagnostic momentum: Continuing a clinical course of action instigated by previous clinicians without considering the information available and changing the plan if required (particularly if plan commenced by more senior clinician).

Tips to combat cognitive bias in healthcare (de-biasing):

1) Slow down.
2) Be aware of base rates for your differentials (i.e. likelihood of CAD in a 20 y/o).
3) Forcing functions:
   a. Use statistical and clinical prediction rules
   b. ROWS (rule out worst case scenarios)
4) Consider what data is truly relevant.
5) Actively seek alternative diagnoses.
6) Ask questions to disprove your hypothesis.
7) Remember you are often wrong.
8) Consider the immediate implications of being wrong.
9) Bias inoculation: teach about cognitive bias

10) Metacognition/decoupling: deliberate disengagement or decoupling from intuitive judgements and engagement in analytical processes to verify initial impressions.
11) Group decision strategy in difficult situations
12) Sim!

Writing a sim scenario around a cognitive bias:

1. Determine the learning objectives. Keep it simple.

2. Use real patient experiences. Realism is essential.

3. Outline what happened and write the story.

4. Create a list of expected actions and expected pitfalls.

5. Scripts for the actors.

6. Write suggested questions for debriefing.