

HEE Enhancing Human Factors

Improve Patient Safety: Decision-Making

Please read the information below to understand more about decision-making and its relevance to human factors and patient care.

Why examine decision-making within medical training?

- Important decisions must be made every day, often under stressful or pressurised conditions.
- Decisions made are open to scrutiny by others, and the potential outcomes of decisions can be severe.
- You may have to make decisions on behalf of others.
- There may be tensions between what is the right thing to do, and what feels like the right thing to do.

Understanding decision-making in medicine is not just an examination of the clinical data and reasoning that was used to make a decision. It is also important that the underlying human thought processes that allow us to make decisions, such as perception and integration of information and making judgements based on that information, are understood and potential pitfalls avoided.

How do we make decisions?

Two contrasting models of decision-making are presented in the Enhancing Human Factors training; the Normative model and the Descriptive model.

- Normative is a rational approach to decision making. This is based on analysis and following standard steps or stages to make decisions. **Rational decision-making** is slower, more conscious, effortful, explicit and logical.
- Descriptive is based on intuition and, whilst quicker, is therefore subject to errors and biases. **Intuitive decision-making** is quick, automatic, effortless, implicit and often emotional.

Rational Decision Making (the Normative Model)	Intuitive Decision Making (the Descriptive Model)
<ol style="list-style-type: none"> 1) Verify, define and detail the problem 2) Generate all viable solutions 3) General objective assessment criteria (Weight and Rate) 4) Choose the best solution generated 5) Implement the best solution 6) Monitor and evaluate outcomes and results 	<ol style="list-style-type: none"> a) Pattern recognition – where configuration and relationships are recognised in information and events b) Similarity recognition – where similarities and differences, in past and present situations, are identified c) Sense of salience – recognising (or assuming) the importance of events and information

It is preferable to use **rational decision-making** when making **high-stakes decisions** and intuitive decision making techniques when making less critical decisions. However, under conditions of stress and pressure, particularly where **time is limited**, individuals will fall back on using **intuition to make**

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decisions. In addition, individuals are more likely to make **decisions using intuition** if the **decision is complex** and involves a lot of factors to consider – **intuitive decision making is a cognitive coping strategy** when individuals are 'overloaded'. Whilst intuitive decision making is quick and efficient, it is also susceptible to **error and bias**. Relying on 'heuristics' or mental shortcuts can become more common as **individuals develop more expertise**, but can also result in **reliance** on these shortcuts, **less flexibility in decision-making** and **reductions in objective and accurate decision-making**.

What are the potential pitfalls, errors or biases associated with intuitive decision-making?

<p>Anchoring Focusing on any information we have, especially initial information (sometimes little and irrelevant)</p>	<p>Sunk Costs Tendency to consider costs already expended (financial, time, resources) as reasons why we should stick to that plan and not deviate</p>	<p>Confirmation Bias Tendency to seek information that supports what we think and fail to look for or pay attention to information which contradicts us</p>
<p>Attributional Biases Attributing characteristics due to limited memorable experiences or stereotypes</p>	<p>Recency Tendency to consider events or things that have happened more recently</p>	<p>Sample Size Not taking due consideration of sample size</p>

How can intuitive decision-making be improved?

- **Reflect** on a decision before and after implementing – Are there areas where emotions might be distorting your perception of the current situation?
- **Examine beliefs** - are they based on reliable facts and evidence?
- **Consult others** - get feedback and validate that your decision seems reasonable.
- **Communicate** - the reasoning behind your intuition can sometimes be made explicit through discussion with others, even if you are initially unsure of why you feel a course of action is the correct one.
- **Increase experiences** - try new things. Patterns develop from experiences.
- **Learn through repetition** in different environments.
- **Learn to recognise and interpret your emotions** - emotions provide signals of previous patterns and experiences. Good decision-making should not be entirely emotion-free – your emotions are powerful cues.