

## Appendix D: Cognitive Autopsy Guideline

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### Benefits

Performing a Cognitive Autopsy following the recognition of diagnostic error is a self-reflection exercise that provides meaningful and realistic feedback. The self-reflection process encourages reflective learning, the development of insight and a change in clinical cognition that reduces the likelihood of the error being repeated.

Sharing the information learned from a Cognitive Autopsy and generating discussion with team members in forums (such as M&M meetings) promotes a team approach to the key learning in order to improve recognition of the cognitive factors involved in the decision making process and encourages recognition and discussion of the system factors that may have contributed.

### When

A Cognitive Autopsy is often performed as an individual process and should be conducted as soon as possible after a diagnostic error has been realised. The self-reflection process encourages reflective learning, the development of insight and a change in clinical cognition that reduces the likelihood of the error being repeated. The principles can also be used as part of a team discussion to identify and prevent future diagnostic errors.

### Cognitive Autopsy Guidelines

1. Conduct as soon as possible after event
2. Avoid discussion with others
3. Be well-rested and have an adequate amount of sleep
4. Find a secluded place, free of interruptions with enough time to consider the events in detail
5. Start with the beginning of the day or shift and work through towards the event
6. Consider the event in detail keeping an open mind about events, thoughts and feelings
7. Pay close attention to ambient conditions
8. Write down everything, however trivial
9. Discuss with others and record their comments and observations
10. Consider the cognitive biases involved and their respective impacts

### Action

The opportunity to discuss the outcomes of a Cognitive Autopsy during M&M meetings is one that should not be missed. This is an important aspect of learning and developing as a team to prevent the same mistakes from recurring in the future. These meetings need to be structured in a way that enables and promotes discussion and analysis of the thinking processes in a non-judgemental manner for this to be an effective, open and honest discussion that leads to the identification of system solutions.

## Considerations during a Cognitive Autopsy

Cognitive Autopsy Steps	Considerations and Rationale			
1. Conduct as soon as possible	<ul style="list-style-type: none"> <li>▪ The recall of information deteriorates rapidly over time</li> <li>▪ As it is important to reflect on every possible aspect of the situation, a detailed reflection as soon as possible allows the best opportunity for learning from the event</li> </ul>			
2. Avoid discussion with others initially	<ul style="list-style-type: none"> <li>▪ Discussing the situation with others before reflecting individually creates the potential to distort perceptions and recollections</li> </ul>			
3. Work through the day from the beginning of the shift through to the event	<ul style="list-style-type: none"> <li>▪ Write down a detailed account of the shift providing as much objective detail as possible</li> <li>▪ Develop a timeline that outlines key points or events throughout the day that could have contributed to an error</li> <li>▪ Use the timeline to identify the critical decision points for the case under review</li> <li>▪ Reflect on the decision points to identify key cues and decision goals (Be aware of hindsight bias)</li> </ul>			
4. Consider the event in detail keeping an open mind about events, thoughts and feelings	<p>While reflecting on the event consider the following stages of decision making:</p> <p><b>Plan</b></p> <ul style="list-style-type: none"> <li>▪ Do I feel comfortable with my judgement?</li> <li>▪ Was the patient comfortable with my judgement?</li> </ul> <p><b>Reflect</b></p> <ul style="list-style-type: none"> <li>▪ Does it make clinical sense?</li> <li>▪ Did I put in enough effort thinking about the case?</li> <li>▪ Did I have biases when thinking about the case?</li> </ul> <p><b>Manage</b></p> <ul style="list-style-type: none"> <li>▪ Do I need more information or skills to manage this case better?</li> </ul>			
5. Consider the ambient conditions	<ul style="list-style-type: none"> <li>▪ Was it a busy shift, lots of pages, other clinical priorities to manage?</li> <li>▪ What else was going on around me such as new procedures, organisational changes, different environment or different colleagues?</li> <li>▪ Were there other things on my mind that day such as a conflict at home or an unwell family member?</li> </ul>			
6. Consider the cognitive biases involved and their respective impacts on the decision making process in this case	<p>Common biases related to diagnosis and clinical decision making include:</p> <table border="1" data-bbox="544 1599 1398 1727"> <tbody> <tr> <td data-bbox="544 1599 868 1727"> <ul style="list-style-type: none"> <li>▪ Anchoring</li> <li>▪ Framing</li> <li>▪ Availability</li> </ul> </td> <td data-bbox="868 1599 1398 1727"> <ul style="list-style-type: none"> <li>▪ Confirmation</li> <li>▪ Overconfidence</li> <li>▪ Attribution error</li> </ul> </td> </tr> </tbody> </table>		<ul style="list-style-type: none"> <li>▪ Anchoring</li> <li>▪ Framing</li> <li>▪ Availability</li> </ul>	<ul style="list-style-type: none"> <li>▪ Confirmation</li> <li>▪ Overconfidence</li> <li>▪ Attribution error</li> </ul>
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### References:

Croskerry, P, Singhal, G and Mamede, S. 2013. *Cognitive debiasing 1: origins of bias and theory of debiasing*: Published online first, *BMJ Quality and Safety*, Vol. 0, pp. 1-7.

Croskerry, P. 2003. *The importance of cognitive errors in diagnosis and strategies to minimize them*. *Acad med*; 78: 775-80.

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