

Overview of mental health and addiction adverse event review methods, types and approaches



The following overview aims to help clinicians better understand the various adverse event review methodologies available. This is not an exhaustive list and other methodologies may exist.

The Learning Review and London Protocol methods are the most useful for mental health and addiction (MHA) services when undertaking reviews; file/desk reviews are also commonly used. The other methods are included as part of a toolkit that users may choose to explore further as resource allows.

Whichever review method is used, the National Adverse Events Reporting Policy 2017 states that the review should be characterised by open communication, consumer participation, culturally safe practice, system change and clear accountability for improvements.¹ It is highly recommended that services consider how they bring an impartial lens to any review methodology used, as well as considering the needs and expectations of consumers and whānau.

Review method	Description	When to use	Strengths	Weaknesses	Training and resources available
Learning Review ²	<p>Designed for complex systems, particularly those involving people.</p> <p>A social sense-making activity that reviews an accident, incident or even normal work for clues as to where staff contribute to the safety of operations or where the system inhibits this capacity.</p> <p>Designed to facilitate the understanding of the factors and conditions that influence human actions and decisions by encouraging individual and group sense-making at all levels of an organisation.</p>	Designed to be used with complex systems.	<p>Seeks to understand what led people to do what they did at the time.</p> <p>Avoids use of 'why' questions.</p> <p>Reduces hindsight bias.</p> <p>Compares work as done with work as imagined.</p> <p>Uses those doing the work as experts in how to do the work.</p> <p>Informed by human factors and resilience engineering.</p>	Use of focus groups may be time intensive.	<p>Currently the focus of the Health Quality & Safety Commission's Adverse Events Learning Programme education: www.hqsc.govt.nz/our-work/system-safety/adverse-events/education/adverse-events-learning-programme-workshops.</p> <p>Open Book: Learning Review (March 2021): www.hqsc.govt.nz/resources/resource-library/open-book-learning-review-march-2021.</p> <p>Interactive e-learning module in development (available early 2022) via the Health Quality & Safety Commission's website.</p>

1 Quality check for adverse event analysis (SAC 1 and 2): www.hqsc.govt.nz/resources/resource-library/template-quality-check-for-adverse-event-analysis-sac-1-and-2.

2 Pupilidy I, Vesel C. 2017. *The Learning Review: Adding to the accident investigation toolbox*. URL: www.safetysdifferently.com/the-learning-review-adding-to-the-accident-investigation-toolbox.



Review method	Description	When to use	Strengths	Weaknesses	Training and resources available
London Protocol ³	<p>A method that provides a comprehensive and thoughtful/reflective systems analysis of clinical incidents seeking areas for care improvement.</p> <p>Uses the incident to reflect on what it reveals about the gaps and inadequacies in the healthcare system.</p> <p>Most used and understood method in mental health and addiction (MHA) services in New Zealand.</p>	<p>Multifactorial complicated issues.</p> <p>Multiple system cross-sector involvement.</p>	<p>Review method is designed for use in healthcare.</p> <p>Can be scaled up or down depending on the size of the event in question.</p> <p>System focused.</p> <p>Can provide independence if the review team includes a facilitator and some members from another part of the service.</p>	<p>Contributory factors have been adapted for healthcare from other industries rather than created for healthcare.</p> <p>Difficult to write truly systems-based recommendations without whole-of-sector input.</p> <p>Can be hindsight biased.</p> <p>Focuses on the actions of the people involved rather than the way the system performed.</p> <p>Uses those involved in the incident to identify what went wrong and possible improvements. Reliving the event may be traumatic for those involved in it.</p> <p>Implies a linear progression of adverse events.</p> <p>Focus is on the review team as the experts rather than those doing the work.</p>	<p>Training currently not available to everyone in New Zealand.</p> <p>Practical resources available from the Systems Analysis of Clinical Incidents: The London Protocol webpage of the Institute for Healthcare Improvement website: www.ihl.org/resources/Pages/Tools/SystemsAnalysisof-ClinicalIncidentsTheLondon-Protocol.aspx.</p> <p>Overview video of London Protocol available on: www.youtube.com/watch?v=rAG-f98WzpN8.</p>

³ The London Protocol: <https://healthmanagement.org/c/hospital/issuearticle/the-london-protocol>.



Review method	Description	When to use	Strengths	Weaknesses	Training and resources available
Concise incident analysis tool ⁴	<p>Involves a conscious and deliberate decision to focus primarily on four aspects: the agreed upon facts, key contributing factors and findings, actions for improvement (if any), and evaluation.</p> <p>An analysis by a person(s) with knowledge of the incident analysis process, human factors and effective solutions development in healthcare, with input gathered from consumers, whānau, staff and physicians local to the event as well as organisational or external experts.</p>	<p>Incidents that resulted in no or low harm to the consumer.</p> <p>Incidents primarily limited to one work area, division or department.</p> <p>New incidents for which a comprehensive analysis was recently completed.</p> <p>Initial review to determine whether a comprehensive incident analysis is appropriate.</p>	<p>Less resource intensive than other methods.</p> <p>Uses a systems approach and considers human factors.</p>	<p>Generally facilitated by one person, which may result in an overly narrow focus.</p> <p>Abbreviated scope may not capture all causal factors.</p> <p>Focus is on the review team as the experts rather than those doing the work.</p>	<p>No training currently available for this in New Zealand.</p> <p>Online training available at Geniozz: www.geniozz.com.</p>

⁴ Canadian Patient Safety Institute. 2014. *Concise incident analysis tool: A resource for health care organization*. URL: www.patientsafetyinstitute.ca/en/toolsResources/Research/commissionedResearch/IncidentAnalysisMethodPilotStudy/Pages/default.aspx.



Review method	Description	When to use	Strengths	Weaknesses	Training and resources available
Root cause analysis (RCA) ⁵ RCA ² (root cause analysis actions) ⁶	<p>A systematic process for identifying the root causes of a problem or event and describing an approach to responding to them.</p> <p>Asks three questions:</p> <ul style="list-style-type: none"> • What happened? • Why did it happen? • What can be done to prevent it happening again? 	<p>Uncomplicated events with few causal factors.</p> <p>Linear events with low complexity.</p>	<p>Can identify systems-based corrective actions.</p> <p>Carried out by a multidisciplinary team.</p> <p>Provides structure to the retrospective analysis of adverse events.</p>	<p>Time and resource intensive.</p> <p>Difficult to write truly systems-based recommendations without whole-of-sector input.</p> <p>Implies a singular, linear cause.</p> <p>Can be hindsight biased.</p> <p>Can become focused on clinician deficit rather than systems factors.</p> <p>Focus is on the review team as the experts rather than those doing the work.</p>	<p>No training currently available for this in New Zealand.</p> <p>Resources available on:</p> <ul style="list-style-type: none"> • www.patientsafety.va.gov • www.ihi.org.

5 US Department of Veterans Affairs, Root Cause Analysis: www.patientsafety.va.gov/media/rca.asp.

6 National Patient Safety Foundation. 2015. *RCA²: Improving Root Cause Analyses and Actions to Prevent Harm*. Boston, MA: National Patient Safety Foundation. URL: www.ihi.org/resources/Pages/Tools/RCA2-Improving-Root-Cause-Analyses-and-Actions-to-Prevent-Harm.aspx.



Review method	Description	When to use	Strengths	Weaknesses	Training and resources available
AcciMap ⁷	<p>A systems-based technique for analysing events that occur in complex sociotechnical systems.</p> <p>Looks at all levels of a system, from higher governmental and regulatory levels to the actual work being carried out.</p> <p>Results in a graphical representation of the event.</p>	<p>Useful for complex events involving multiple levels of a system.</p> <p>To examine the relationships between the different levels of a system.</p>	<p>Identifies system-wide errors that led to the event.</p> <p>Simple to learn and use.</p> <p>Considers causal factors across systemic levels.</p> <p>Provides a visual representation of the event aetiology.</p> <p>Enables extended timeline of causality to be established as it considers different levels.</p> <p>Looks beyond the organisational level.</p>	<p>Can be time consuming.</p> <p>Quality of analysis produced is dependent on the quality of the investigation.</p> <p>Does not provide a method to develop corrective measures.</p> <p>Does not provide a structured taxonomy for error classification.</p> <p>Its graphical output can become hard to decipher when used for very complex events.</p> <p>Focus is on the review team as the experts rather than those doing the work.</p>	<p>No training currently available for this in New Zealand.</p> <p>Resources available on: https://systemsthinkinglab.com.</p>

⁷ Svedung I, Rasmussen J. 2002. Graphic representation of accident scenarios: mapping system structure and the causation of accidents. *Safety Science* 4: 397-417.



Review method	Description	When to use	Strengths	Weaknesses	Training and resources available
File/desk review	Review of a clinical record to identify issues and make recommendations to address an issue; can be used as a standalone review or diagnostic to trigger a more in-depth methodology. This may sometimes be enhanced by selected interviews and/or a review conducted by someone outside that clinical unit.	Initial review to determine whether a comprehensive incident analysis is appropriate. Usually indicated when the initial triage of an incident raises no specific issues of concern in terms of systems, processes and care delivery.	Requires minimal resources. Can be completed by an independent reviewer if required. Can be used as a triage process to decide if a more in-depth review is required.	May not gather all relevant information. Can be hindsight biased. Focus is on the reviewer as the expert rather than those doing the work.	
Failure mode and effect analysis (FMEA) ⁸	A systematic method of identifying and preventing product and process problems before they occur. It is proactive and does not rely on something going wrong as the trigger for an investigation.	Before implementing a new process. Before altering an existing process.	Particularly useful in evaluating a new process before implementation and in assessing the impact of a proposed change to an existing process.	May not identify all potential failures. Requires large amounts of time, effort and resource. Teams may require sources of information other than personal experience and knowledge.	No training currently available for this in New Zealand. Online training available at: <ul style="list-style-type: none"> • https://quality-one.com/fmea/fmea-training/ • https://asq.org/training/fmea-for-beginners-fmea01jpr.

⁸ Shebl NA, Franklin BD, Barber N. 2012. Failure mode and effects analysis outputs: are they valid? *BMC Health Services Research* 12: 150.



Other approaches to support adverse event review processes

Approach to support review processes	Description	When to use	Strengths	Weaknesses	Training and resources available
Yorkshire Contributory Factors Framework ⁹	An evidence-based framework that has been specifically developed for the healthcare setting. This is not a review method as such but can be used to strengthen other methods.	Describes both latent organisational failures and the error-producing conditions in which active failures occur. Gives a greater weighting to systems rather than human failings.	Developed by clinicians in a health setting.	Developed in a hospital setting so may not be applicable to out-of-hospital care settings. Does not include a consumer perspective of the causes of incidents.	No training currently available for this in New Zealand.
Facilitated restorative practice ¹⁰ meetings	Facilitated restorative practice meetings between consumers and/or whānau and staff involved in care, as soon as practicable after the event.	This can be an important process that complements adverse event review rather than replaces it.	The focus is on engagement, healing relationships, addressing harm to all parties (including affected staff) and promoting wellbeing rather than identifying cause and attributing blame. Aligns with other forms of investigation analysis and tools.	New in healthcare. Can be resource intensive in terms of time, staff and training.	Health Quality & Safety Commission's Adverse Events Learning Programme virtual adverse events training. Phase 2 of the national mental health and addiction (MHA) quality improvement programme 'Learning from adverse events and consumer, family and whānau experience' project.

⁹ Yorkshire Contributory Factors Framework: www.improvementacademy.org/tools-and-resources/the-yorkshire-contributory-factors-framework.html.

¹⁰ Ministry of Health. 2019. *Hearing and Responding to the Stories of Survivors of Surgical Mesh*. Wellington: Ministry of Health. URL: www.health.govt.nz/publication/hearing-and-responding-stories-survivors-surgical-mesh.



Bibliography

- Lawton R, McEachean RR, Giles SJ, et al. 2012. Development of an evidence-based framework of factors contributing to patient safety incidents in hospital settings: a systematic review. *BMJ Quality & Safety* 21: 369–80. doi: 10.1136/bmjqs-2011-000443.
- Peerally M, Carr S, Waring J, et al. 2017. The problem with root cause analysis. *BMJ Quality & Safety* 26(5): 417–22. doi:10.1136/bmjqs-2016-005511.
- Scion. 2017. *Guide to Doing a Learning Review*. Rotorua: New Zealand Forest Research Institute Limited (Scion). URL: <https://safetree.nz/wp-content/uploads/2017/11/Guide-to-doing-a-learning-review-Nov-2017.pdf>.
- Shebl NA, Franklin BD, Barber N. 2012. Failure mode and effects analysis outputs: are they valid? *BMC Health Services Research* 12: 150. doi:10.1186/1472-6963-12-150.
- Taylor-Adams S, Vincent C. 2001. *Systems Analysis of Clinical Incidents: The London Protocol*. London: National Patient Safety Agency, Clinical Safety Research Unit, Imperial College London.
- Vincent CA. 2004. Analysis of clinical incidents: a window on the system not a search for root causes. *BMJ Quality & Safety* 13: 242–3.
- Wu AW, Lipshutz AK, Pronovost PJ. 2008. Effectiveness and efficiency of root cause analysis in medicine. *JAMA* 299(6), 685–7.

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