

Root cause analysis in action

Root cause analysis (RCA) is used to ask why an event happened. Often when an error occurs, it is not due to individual failure, but a problem with the systems in place. These are not always obvious, and using tools can help you identify the root cause of the problem, so you can take measures to incorporate change to avoid the event from happening again. RCA is a collective term that includes a range of different approaches to uncover a problem. An example of these are included below.

The 5 whys

This form of root cause analysis involves asking ‘why’ 5 times about a scenario. This encourages you to think about the situation in more detail and really find the root cause of the problem. This approach is easy to use, and very accessible, which can help to increase compliance with its use in practice. This approach may not be suitable in overly complex situations, and if not used with guidance, can lead to self-blame. The following examples shows how it can be used in practice.

“A patient was discharged from the hospital without its insulin”

WHY: The insulin was not put up for the client to collect

WHY: There was no discharge information written up on the notes

WHY: The vet had spoken to owner and didn’t realise they had to write the notes up immediately

WHY: The vet was new and was not aware of the current protocols

WHY: A training protocol for new team members wasn’t available

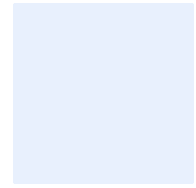
By asking ‘why’ repeatedly, the practice have identified that they need a training protocol for new team members. Without continuing to find the root cause of the problem, this mistake could have been inadvertently repeated.

Contributory factors checklist

The contributory factors checklist can be used to identify which underlying factors were relevant to the significant event. There are some factors that may have had more relevance to the event than others and can guide as to what factor needs prioritising. The checklist also categorises the factors into groups, indicating if there was a single situational issue occurring or a larger organisational factor. This checklist can be more useful to identify the root cause of more complex situations and takes into account other factors that may have contributed to the overall event. The checklist should be completed by every team member involved within the event, and can be completed with support from the team, or individually. The following example shows how it can be used in practice.

Contributory factors checklist

Click here to enter your practice name and click on the square above to enter your practice logo



This checklist is designed to help practices investigate what might have increased the likelihood of a significant event. It suggests questions that you might want to discuss with those who were involved in the event with the intention of highlighting where improvements to practice systems, structures and local working conditions can be made. This form should be completed by each individual involved in the event.

Situational factors	Prompting question	Relevant to event?	Other/notes
Team factors e.g. Conflicting team goals / lack of respect for colleagues / poor delegation / absence of feedback	Did all those involved in the event function as a team?	<input type="checkbox"/> Yes	The information I gave to the owner was not given to the rest of the team
		<input checked="" type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	
Individual factors e.g. Fatigued / stressed / rushed / distracted / inexperienced	How did you feel on the day of the event?	<input type="checkbox"/> Yes	I am new and don't feel like I was up to date on all the protocols that I need to be
		<input type="checkbox"/> Maybe	
		<input type="checkbox"/> No	
Task characteristics e.g. An unfamiliar / difficult / monotonous task	Did the characteristics of the task at hand make the event more likely?	<input type="checkbox"/> Yes	New diabetic patients are always time consuming, and protocols differ from practice to practice.
		<input checked="" type="checkbox"/> Maybe	
		<input type="checkbox"/> No	
Patient factors e.g. Aggressive / difficult to handle / complex medical history / unusual physiology	Were there any reasons this event was more likely to occur to this particular patient?	<input type="checkbox"/> Yes	The patient's history was complicated and took a long time to discuss with the owner.
		<input checked="" type="checkbox"/> Maybe	
		<input type="checkbox"/> No	
Local working conditions	Prompting question	Relevant to event?	Other/ notes
Workload/team factors e.g. High practice workload / insufficient staff / staff sickness	Did the staff provision match the expected workload at the time of the event?	<input type="checkbox"/> Yes	I had time to discuss this with the owner, but I went straight into consults afterwards, so didn't have time to write up my clinical notes.
		<input type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	
Leadership, supervision & roles e.g. Inappropriate delegation / unclear responsibilities / remote supervision	Did you understand your role?	<input type="checkbox"/> Yes	I didn't know the protocols for discharging the patient and didn't know that they would be discharged while I was in consults.
		<input type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	

Drugs, equipment & supplies e.g. Unavailable drugs / Equipment not working / Inadequate maintenance / no supplies delivery	Were the correct drugs, equipment and supplies available and working properly?	<input checked="" type="checkbox"/> Yes	They were available, but I hadn't dispensed them.
		<input type="checkbox"/> Maybe	
		<input type="checkbox"/> No	
Design of equipment, supplies & drugs e.g. Confusing design / not fit for purpose / similar drug names / ambiguous labelling & packaging	Are there any characteristics about the equipment, disposables or drugs used, that was unhelpful?	<input type="checkbox"/> Yes	
		<input type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	
Organisational factors	Prompting question	Relevant to event?	Other/ notes
Physical factors e.g. Poor layout / lack of space / excessive noise/ too hot or too cold / poor visibility, lighting access to patient.	Did the practice environment hinder the work in any way?	<input type="checkbox"/> Yes	
		<input type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	
Team members' training e.g. Inadequate training / no time for teaching / training not standardised / no regular updates	Were there any issues with skill or knowledge?	<input checked="" type="checkbox"/> Yes	I wasn't aware of the patient discharge protocols
		<input type="checkbox"/> Maybe	
		<input type="checkbox"/> No	
Local guidelines/policies/ protocols/checklists e.g. complicated / lack of standardisation / contradictory resources exist	Did local guidelines, policies, protocols, checklists help or hinder?	<input type="checkbox"/> Yes	
		<input type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	
General factors	Prompting question	Relevant to event?	Other/ notes
Safety culture e.g. Patient safety awareness / fear of documenting errors / attitude to risk management	Has the culture of your practice in relation to patient safety been a barrier?	<input type="checkbox"/> Yes	
		<input type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	
Communication (written & verbal) e.g. Poor communication between team members / issues with handover / lack of communication / unable to read notes / inappropriate abbreviations used / unable to contact correct team members / notes unavailable.	Were patient/ client notes available, accurate & readable?	<input type="checkbox"/> Yes	This was because I hadn't written them yet
		<input type="checkbox"/> Maybe	
		<input checked="" type="checkbox"/> No	

Adapted from the Yorkshire and Humberside Improvement Academy's: A Framework for Patient Safety Incident Investigation: Yorkshire Contributory Factors Framework (YCF)



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Cause and Effect (fishbone)

A Cause and Effect (Fishbone) diagram is useful when identifying causes of problem areas, or areas where many factors can cause an issue. Known factors such as process, environment, people and equipment can be used as headings while the team discusses what events occur that lead to the error. This can be used as a good visual tool to encourage team discussion on an assortment of issues, and may identify a number of causes. This tool can be useful for the team to look at the bigger picture of the process, and help to alleviate any individual blame. The 5 whys can then be used under each branch (or bone). An example of this process is below.

