Chartwells Root Cause Analysis Guidance

Background
Root cause analysis can be undertaken to determine the cause of a food safety incident. To be effective, root cause analysis must be performed systematically, and include all relevant parties involved in the incident. There are a number of established methods that are available to support effective root cause analysis.

Introduction
Across Chartwells to effectively determine incident root cause we use the '5 Why's?' method. It requires an incident investigator to ask a series of 'why' questions. Each time a cause is identified, the question 'why did it happen?' is applied, and an answer to the 'why' question recorded, with this process repeated until the root cause is identified.

The '5 Why's?' Root Cause Analysis Method
The '5 Why's?' method of root cause analysis focuses on identifying the key issues that need to be solved through a series of 'why?' related questions. These 'why' questions, if asked correctly, can be used to successfully trace back to the root cause of the issue. The principle of this method indicates that 5 of these specific 'why' questions are sufficient to determine the underlining root cause or problem. However, this is dependent on how specific the 'why' questions being asked are.

Incident investigation
The root cause investigator's knowledge and experience may impact on their ability to ask 'why' questions. When determining root cause, regional teams should engage with their HSE Sector leads where any support is required, or any clarification or guidance is needed on any food safety incident and / or root cause analysis exercise. As part of any root cause analysis exercise, previous food safety incidents should be reviewed, and the learning from these used as part of incident investigations and root cause analysis.

Implementing a solution
Following the root cause analysis exercise, it is important that an action plan is developed and documented to prevent similar incidents occurring. The action plan should detail the teams and business representatives who have overall responsibility for closing out the action plan, with clearly defined timeframes and action closure confirmation evidenced. To ensure food safety incidents and root cause analysis are learn from, it is critical that serious food safety incident root cause analysis actions are shared across all sectors, to ensure similar incidents are prevented in the future. Ongoing checks through local monitoring should be implemented to ensure any solution is fully embedded operationally.

Due diligence
Documenting root cause analysis is important to evidence due diligence, with requisite investigations and root cause analysis completed being thorough, balanced, and objective, with a clear action plan developed and all actions tracked to completion with action closure evidenced. If more specific and relevant questions are asked, then the root cause might be identified in fewer than 5 'why' questions. If the 'why' questions are not specific or relevant, then more than 5 'why' questions may be required to identify the root cause. In principle the '5 Why's?' root cause analysis methodology is not restricted to 5 questions, it can be fewer, or more that 5 questions to get to the root cause. The root cause examples detailed in this guide are fictitious, but they help to demonstrate the effectiveness of the '5 Why's?' method in identifying the incident root cause.

Example 1: Fictitious Root Cause Analysis example using the '5 Why's?' method
Customer served the incorrect milk

Step 1: State the specific problem associated with the food incident in the box below.

A customer requested their 'usual' drinks order, specifically '2 lattes'. A new catering assistant took the order and served the customer their latte drinks with cow's milk. The customer had an allergy to cow's milk, resulting in the customer having an allergic reaction.

Step 2: Why did the problem happen? Write the answer in the box below.

Why did the new catering assistant not ask the customer what milk they wanted in the drinks they ordered?
The new catering assistant was not aware that they were required to confirm the milk type for each respective drink ordered by customers.

Step 3: If the above answer does not identify the root cause of the problem stated in the answer to Step 1, ask 'Why?' again and write the answer in the box below.

Why was the catering assistant not aware of the requirement to confirm the milk type with the customer?
The catering assistant had not received the allergy drinks service training prior to commencing in role and prior to serving customers.

Step 4: Loop back to Step 3 and ask 'Why?' again; until the team reaches agreement that the root cause of the problem has been identified. This may require asking 'Why?' fewer or more than 5 times.

Why had the catering assistant not received the training?
The Unit Manager was on leave and the duty manager did not train the new catering assistant on the drinks service process prior to the new catering assistant serving customers for the first time.

Step 5: Loop back to Step 4 and ask 'Why?' again; until the team reaches agreement that the root cause of the problem has been identified. This may require asking 'Why?' fewer or more than 5 times.

Why did the duty manager not ensure the new catering assistant received the requisite training prior to serving customers?
The duty manager did not have a handover with the unit manager prior to their leave period and assumed the new catering assistant had already received the requisite drinks service training.

Root Cause Analysis	Outcome
State the root cause that led to the food safety incident occurring.	*The new catering assistant had not received requisite training on the drinks service process prior to commencing in role and serving customers. This was due to the unit manager and duty manager not effectively communicating, prior to the unit managers leave period, with the duty cover incorrectly assuming the new colleague had been trained, and not checking if the new colleague had been trained on the drinks service process by referencing the colleagues Allergen Awareness Food Safety Discussions Training Record Card.*
State the corrective measures identified to prevent incident reoccurrence.	*All colleagues to receive training commensurate with their role prior to serving customers, with training clearly recorded on the colleagues Allergen Awareness Food Safety Discussions Training Record Card.*

Example 2: Fictitious Root Cause Analysis example using the '5 Why's?' method
Pupil served a food item that did not align to their medical diet

Step 1: State the specific problem associated with the food incident in the box below.

A pupil on a medical diet asked a catering assistant for a food item that did not align to their medical diet. The food item requested by the pupil contained an allergen that was not suitable for pupil's dietary needs or aligned to the pupil's medical diet. The catering assistant served the food item as requested by the pupil. The pupil ate the food item, and as a result the pupil suffered an allergic reaction.

Step 2: Why did the problem happen? Write the answer in the box below.

Why did the colleague serve the pupil an item of food that was not aligned to the pupil's specific medical diet?
There was a large queue of pupils waiting to be served and the colleague did not want to hold up the lunch service queue, so took a decision to serve the pupil to ensure lunch service was not unduly impacted.

Step 3: If the above answer does not identify the root cause of the problem stated in the answer to Step 1, ask 'Why?' again and write the answer in the box below.

Why was there a large queue of pupils?
There was no school staff supervising pupils during the lunch service period.

Step 4: Loop back to Step 3 and ask 'Why?' again; until the team reaches agreement that the root cause of the problem has been identified. This may require asking 'Why?' fewer or more than 5 times.

Why was there no school staff supervising pupils during lunch service?
There was no pre-service process in place to check school staff were available and would be in place to supervise pupils during the lunch service period.

Step 5: Loop back to Step 4 and ask 'Why?' again; until the team reaches agreement that the root cause of the problem has been identified. This may require asking 'Why?' fewer or more than 5 times.

Why was there no pre-service process in place?
There had been no historic challenges with the availability of school staff to supervise pupils during lunch food service periods, therefore a pre-service process to confirm school staff availability was not deemed to be necessary.

Root Cause Analysis	Outcome
State the root cause that led to the food safety incident occurring.	*There was no school supervision of the lunch queue, resulting in multiple pupils queueing over and above normal service levels. To move the pupil queue forward the catering assistant took a decision to serve a pupil an item that was not on their medical diet, rather than follow the established medical diet process.*
State the corrective measures identified to prevent incident reoccurrence.	*All colleagues to receive refresher training on the requirement to follow medical diet requirements at all times, with no exceptions, and the catering team to ensure there is a pre-service brief to ensure school staff are available to monitor and manage pupils throughout the lunchtime food service period.*

Example 3: Fictitious Root Cause Analysis example using the '5 Why's?' method
Pupil served a dish containing milk

Step 1: State the specific problem associated with the food incident in the box below.

A catering assistant served a pupil with a milk allergy with a dish that contained milk, resulting in the pupil having an allergic reaction. The food items were transported to a service area outside of the main catering facility service area, with food items plated during service.

Step 2: Why did the problem happen? Write the answer in the box below.

Why did the catering assistant serve the pupil an item that contained an ingredient to which they are allergic?
The catering assistant assumed the food did not contain milk.as a label on the food did not have any allergens ticked as contained in the food.

Step 3: If the above answer does not identify the root cause of the problem stated in the answer to Step 1, ask 'Why?' again and write the answer in the box below.

Why did the food label have no allergens ticked?
The label had not been completed correctly by the chef.

Step 4: Loop back to Step 3 and ask 'Why?' again; until the team reaches agreement that the root cause of the problem has been identified. This may require asking 'Why?' fewer or more than 5 times.

Why had the chef incorrectly completed the food label?
The chef used the food label to identify the food item, and not to communicate allergens, as allergen information was detailed separately on allergen cards.

Root Cause Analysis	Outcome
State the root cause that led to the food safety incident occurring.	*The label had been used and completed incorrectly by the chef, with none of the 14 regulated allergens ticked as a contains, as the chef had used the label to communicate the food type only, as allergen information was detailed separately on allergen cards. This resulted in the catering assistant assuming the food did not contain milk based on the information detailed on the allergen label placed directly on the food by the chef.*
State the corrective measures identified to prevent incident reoccurrence.	*Ensure all colleagues are re-trained on the requirements to ensure allergen information is correctly communicated on labels placed on food items, and the correct food labels are used. Where food items are to be served away from the main catering service area, all medical diet meals must be pre-plated and labelled correctly and clearly prior to service.*

Example 4: Fictitious Root Cause Analysis example using the '5 Why's?' method
A medical diet meal was incorrectly prepared by the chef

Step 1: State the specific problem associated with the food incident in the box below.

A child on a medical diet was served the incorrect meal prepared by the chef, resulting in an allergic reaction.

Step 2: Why did the problem happen? Write the answer in the box below.

Why was the child served the incorrect meal?
The chef was an agency chef who was covering for unplanned absence in unit, and they prepared the incorrect menu for the child.

Step 3: If the above answer does not identify the root cause of the problem stated in the answer to Step 1, ask 'Why?' again and write the answer in the box below.

Why was this error not identified at the double check stage?
Due to colleague absence, there were no other leaders in to complete the double check, therefore the double check was missed.

Root Cause Analysis	Outcome
State the root cause that led to the food safety incident occurring.	*Due to unplanned absence resulting in insufficient provision of in-unit resource, the double designed to confirm the medical diet is correct was not completed.*
State the corrective measures identified to prevent incident reoccurrence.	*Develop a system that ensures business continuity is maintained during periods of planned or unplanned absence, to ensure established operational procedures are completed as designed, to include the double check process.*

When to use '5 Why's?' Root Cause Analysis Method

The '5 Why's?' Root Cause Analysis Method is to be used following an incident, where it is not immediately clear what the specific root cause of an incident is. Albeit the examples detailed within this guidance are focussed on allergen management, it can be used to assist operational teams in determining root cause for any incident, food safety or otherwise. For further support and guidance, please contact your Line Manager or your HSE Sector lead.