This is the first training in a new DBHDS Risk and Quality Management training series designed to help providers develop and manage an internal risk and quality program.

Each of the webinars will be approximately 30 minutes long to make it easy for everyone to fit them into their busy schedules.

Future webinar topics will include

- Monitoring events through risk triggers and thresholds
- How to make incident reporting systems work for you
- Assessing your organization’s risk
- Mortality reviews, and
- Identifying consumer health risks.
Welcome to our webinar -- Root Cause Analysis, Part 1.

In Part 1, we are going to review the basics of Root Cause Analysis and introduce you to the ‘5 Whys’ approach to analyzing an event.

In Part 2, we will demonstrate how a root cause analysis can help you to identify the underlying causes of an event by working through an example.
Let's start by taking a look at what we consider to be a Root Cause Analysis.

The first thing you may notice in this slide is that a root cause analysis is intended to analyze unexpected incidents, not routine events. You typically conduct a Root Cause Analysis for serious incidents.

Second, the approach focuses on system, processes, and outcomes. It does not focus on people. Yes, you will analyze who did what but you are looking for systems and process problems, not personnel problems.

By process I mean a group of activities that are related and organized and are repeated. Processes can lead to an output or they can achieve a certain goal. Examples of processes with which most people are familiar are the admissions and discharge processes, the medication administration process, the person centered planning process, an individual's personal care process, and the billing process. For each of these processes there are certain steps you must take and there is an outcome.

Systems are complex sets of processes that involve many parts. Those parts may be activities or they may be mechanical. An example of a system is a provider payment system, which will involved billing processes and reimbursement processes and coding processes. An example of a mechanical system is the heating/cooling system of your home, which has controls and thermostats, a heat pump, a furnace, fans and coils. A group home has processes and systems. For example, the admissions process, the scheduling process, the person centered planning processes, and risk and quality improvement processes as well as mechanical systems such as the heating/cooling system and the hotwater system.

Finally, a Root Cause Analysis is about taking action. When you identify the root cause of an incident, you can then take steps to prevent it from happening again.
In the previous slide, I said that a Root Cause Analysis focuses on systems, processes and outcomes, not people. That’s important, because this process is not about placing blame or punishing people.

A root cause analysis begins with the assumption that no one comes to work intending to make a mistake or to hurt someone.

That’s not to say that a root cause analysis never uncovers intentional acts of harm. That may happen and when it does, you must take the appropriate action.

However, the root cause analysis should focus on systems failures.
When you’re conducting a root cause analysis, it’s not enough to find out what happened, to keep an incident from happening again, you need to find out why it happened.

- Why was the wrong medication given?
- Why did that person fall and break her leg?
- Why did it take so long to evacuate the building when there was a fire?

The answers to these questions will ultimately lead you to more questions that in turn will lead you to the root cause.

Once you’ve identified the root cause you will know what actions you need to take to reduce the risk of another similar event.
When should you conduct a root cause analysis?

You should conduct a root cause analysis any time there is a serious incident that did or could have resulted in a death or a permanent disability to someone, whether that someone is a consumer, staff member, volunteer, visitor or anyone else who is on the grounds of or participating in your program.

For example,

- an unexpected death,
- an event that caused a person to become blind or
- a disaster such as a fire that did or could have resulted in the death of everyone in the building.

But you don’t have to stop there. You can conduct Root Cause Analyses on:

- Any unusual incident
- A series of related incidents. For example, medication errors that occur repeatedly on the same shift.
- Incidents that may not cause a permanent disability or death but that cause harm happen often. For example, frequent fractures, especially of feet, toes and fingers.
There are times when you **DO NOT** conduct a root cause analysis.

When someone cause harm intentionally.
When someone breaks the law.
When illegal substances or alcohol are involved.
And when there is an allegation of abuse or neglect.

For all of these actions, there are separate processes that you need to implement, either through law enforcement, through your human resource office, or other avenues.

We are not going to address these processes in this training. We want to keep our focus on root cause analysis.
The best way to conduct a root cause analysis is by convening a team. That team should be made up of people who were involved in the event and people responsible for the processes or systems.

It doesn’t have to be a large team. It can be only 3 people. If yours is a very small organization that employs only a few people, you might want to have everyone involved in the RCA.

If your organization is very small and it is impossible to convene a team, you can have a single individual conduct the root cause analysis. If you do this, that person should be a manager or supervisor who was not involved in the incident.
Getting to the root cause of an incident can be difficult, especially for those involved in the incident. Staff will be worried about being punished or found to be at fault. People may be defensive about what they did or why they did it. That makes it all the more important to begin any root cause analysis by setting some ground rules for the team.

• Treat each other and the people you interview with respect

• Listen and be open minded. Don’t come into the room with preconceived ideas about what happened. Don’t be defensive. You’re not there to place blame.

• Confidentiality. Don’t discuss what you learned except with your team and with management. And remember, what is said in the room where the RCA takes place stays in the room. Don’t turn around and tell anyone else what was discussed.
Now that you’ve convened a team, you’re ready to start.

The first step is to look at all records of the incident including incident reports, medical records, service plans, logs, video tapes, whatever you can find. If a record is related to the event, it should be made available to the team and the team should review it.
Next you want to find out what happened from the perspective of the person or people involved – the medication aide who gave the wrong medication, the staff on duty when the power went out, the van driver who saw the person trip getting into the vehicle.

How many people you interview depends on the nature and the seriousness of the event. If an event involved many people, you want to interview all of them but an event that involves only one person may only require you to interview that person.

When you interview, remember that this is not a criminal investigation and you’re not looking to determine if someone was at fault – you are looking for the facts in order to solve a problem. Don’t put the person you’re interviewing on the defensive.

You want the people you’re interviewing to feel safe so they will tell you everything they know.

You want to ask questions in a manner that helps them to remember the details because in a root cause analysis, the details matter.

You can record the interviews and make transcripts but you can also just take notes – good notes. If you do decide to record the interviews, you need to assure those you interview that you are doing this only to get the facts right. In either case, make sure you know who was interviewed and that person’s account of the event.
Here are some possible interview questions.

These are general questions. You should develop questions that address the specific incident for which you are conducting a root cause analysis.
It isn’t always possible for safety reasons to observe the typical action in progress, but with a little creativity, you can watch a similar process.

For example, you don’t want to start a fire but you can have an unannounced fire drill.

You don’t want to restrain someone unnecessarily but you can have staff demonstrate on each other how a restraint technique should be performed.

On the other hand, there are many processes you can observe in action. You can, for example, watch medication being given or watch someone being transported in a wheelchair.

Whatever process you’re studying, take the time to observe it.
You need to know the exact date and time of the incident.

That should lead you to identify environmental conditions or events that may have had an impact on the incident.

For example,
• weather conditions that caused someone to slip and fall,
• a traffic accident that caused a staff person to be late for work,
• a party taking place that diverted everyone’s attention away from the incident taking place in the next room
• or anything else that made that date and time unique.

Write down the date and time and document the environmental conditions associated with that date and time.
You’ve interviewed the person or the people who were involved in the incident, but there may be people who you could not interview or who you chose not to interview.

Take a few minutes to list everyone who was involved, how they were involved, and if you interviewed them, what they said during their interviews or why you elected not to interview them.

Were they participants in the incident?  
Did they witness the incident?  
Were they on duty during the incident?  
Are they still with the agency or did they leave after the incident?  
Were they consumers, staff, visitors?
Use the information you now have to describe what happened and do this as a team to make sure that everyone understands the sequence of events, based on the interviews, the incident reports, and other sources of information.

Write it down. Start from the beginning and move through the sequence of events, step by step, until you reach the critical incident. This is important, especially since people you interview often remember the sequence of events out of order. It will be up to the team to uncover the exact order of events.
Next, write down what actions were taken immediately following the incident.

How did staff respond?
What was the order of the responses?
When did each response take place?
Again, you need to know what happened, when it happened, and who did what and I what order.
The next step is to compare what happened to what should have happened – before, during and after the incident. Compare the actions taken to the requirements in policies, procedures, regulations, accreditation standards, or laws.

Your intent here is not to find blame with someone for not following policies and procedures, or for doing something incorrectly. You are simply establishing the facts.

It is possible that everyone responded according to policies and procedures.

It’s also possible that there were no policies and procedures to follow.
Now you know what happened and what should have happened and this is where most people are inclined to stop. They know what the policy and procedures said should have happened, they know what was done and they think they have the answer or, more often, the person responsible. But that’s not the root cause.

Remember, we’re not looking for someone to take blame, we’re looking for systems problems that create situations that lead to serious incidents.

Now you must state the problem. The problem isn’t that policies and procedures weren’t followed, the problem is why the event took place. Why did someone go into a coma unexpectedly? Why did someone choke and die? Why did someone fall and break her leg? Be very specific when you state your problem.
There are many ways to conduct a root cause analysis and some are very detailed and complex but they all focus on one simple approach – asking questions.

If your organization has never conducted a root cause analysis . . .
  if you have a small organization . . .
  if you seldom have events that require a root cause analysis . . .
  if time is an issued and by that I mean that you need to get to the root cause quickly . . .

You should consider the ‘5 Whys’ approach to Root Cause Analysis. It’s simple, it’s easy, it’s quick, and it’s a well-respected approach for conducting a root cause analysis.
The ‘5 Whys’ approach involves looking at any problem and drilling down by asking: "Why?" or "What caused this problem?"

It’s called the ‘5 Whys’ because it usually takes about five questions to get to the root cause. Sometimes it will take less and sometimes it may require a few more questions, but five is about average.

There are some important thing to remember when you’re using the ‘5 Whys’ approach:

- you want clear and concise answers,
- you want to avoid answers that are too simple, and
- you don’t want to overlook important details.

Start with the problem statement you’ve developed and ask, “Why did this happen?”

Typically, the answer to the first "why" prompts another "why" and the answer to the second "why" will prompt another and so on until you reach your root cause.

This technique can help you to quickly determine the root cause of a problem. It's simple, and easy to learn and apply.
That’s the End of Part 1 of Root Cause Analysis.

In Part 2 We Will Look at an Example of the ‘5 Whys’ Approach.

This is the end of Part 1: An Overview of Root Cause Analysis.

Thank you for participating. I hope you will complete Part 2 of the training, where we will take an example and show how you can use a simple and effective technique, called the ‘5 Whys’ to conduct your root cause analysis.
Hello. My name is Marion Greenfield. I am the Director of Risk, Quality and Health Information Management with the Department of Behavioral Health and Developmental Services.

This is the second webinar in a new DBHDS Risk and Quality Management webinar series that is designed to help providers develop and manage an internal risk and quality program.

Each webinar will be approximately 30 minutes long to make it easy for everyone to fit them into their busy schedules.
Welcome to the second of a two part training -- Root Cause Analysis.

In Part 2 we will demonstrate how a root cause analysis can help you to identify the underlying causes of a serious incident by working through an example using a simple but effective approach called the “5 Whys.”.
It Was a Dark Stormy Night . . .

A group home with five residents is struck by lightning around 1:00 am. Two staff are on duty. The power goes off and a few minutes later the smoke alarm sounds. One staff person calls 9-1-1 while the other evacuates the residents. The home’s administrator is called. The rescue squad arrives 15 minutes later. Two of the three residents are hospitalized for exposure. Five days later, one of the residents hospitalized dies of pneumonia.

Let's use an example of a house fire that results in the hospitalization of three residents and the ultimate death of one of the residents. You are the manager of the home in this example.
The first thing you need to ask yourself, is what do we know? What was documented? Chances are that nothing was, so that’s where you begin? You always begin with documentation.
Before you even make the decision to conduct a Root Cause Analysis, you must make sure that you and both staff on duty document everything that happened. The best way to do this is by completing a detailed incident report.

On the night of the fire, everyone was focused on keeping the residents safe and finding alternate housing for the residents.

The next day staff were prevented from entering the home until it was deemed safe and an investigation was conducted by the Fire Marshall.

You, as the Manager did not document the event or the actions taken following the incident and neither did any of your staff.

Don’t let those delays stop you.

As soon as possible after the event, have everyone involved in the event complete an incident report. If they can’t do it in the home, find another location.

Have everyone create and submit their own incident report. This is not something that should be done in a group.
You’ve reviewed the incident reports and as a result, and even before the death of one of the residents, you decide you need to conduct a root cause analysis.

You also decide that a team approach is the best way to proceed and that team will be you and the two staff on duty the night of the incident. The team could be anyone, but it should include at least some of the people involved in the incident, if not everyone.

You will meet with your team to review your plan to conduct a Root Cause Analysis, the approach you plan to take, why you think it’s important to conduct a Root Cause Analysis.

You also want to schedule interviews and schedule a time for the team to get together to analyze the incident.

Since you have both staff there, you should take this opportunity to interview them individually to make sure that you get the best account of the events of the night. Don’t wait any longer to conduct the interviews. The longer you wait, the harder it is for everyone to remember exactly what happened.
Now your team is ready to start working.

Begin by compiling all the information you have about the incident, including your own documentation, and review it with the team.

Compare what was done, including your actions, to what should have been done per policies and procedures, accreditation standards, laws, regulations and other requirements – internal and external.
Once you’ve completed that step, you should have a more detailed picture of the incident.

- You know the date and that it was close to a holiday
- You know who was working and where each of the staff members were
- You know where the residents of the home were.
- You know the event that triggered the incident – a lightening strike
- You know the sequence of events and you know when each event happened.
Now that you know what did happen, you need to compare that to what should have happened based on policies, procedures, regulations, laws or applicable regulatory requirements.

What you find is that staff responded appropriately except that they did not locate the evacuated residents in the van as specified in your operating procedures.

You need to find out why.

What Should Have Happened

Staff followed all policies and procedures . . .

Except . . .

Residents should have been evacuated and put in the van and the van moved to the curb, instead of leaving them to stand on the curb in the cold rain.
State the Problem

The problem is not that lightning struck the house or that there was a fire or that staff didn’t follow policies and procedures.

The problem was:
Three residents of the home were evacuated to the street and not the van, as specified in house procedures and as a result, three were hospitalized for exposure and one died.

But before you do, take a minute to state the problem to make sure everyone understands why you are conducting the Root Cause Analysis. Here is the problem was during a fire, the residents were evacuated to the street and not the van and as a result, three residents were hospitalized for exposure and one of the residents ultimately died of pneumonia.
The first question should come directly from the problem statement, which is that the residents were evacuated to the street and not the van. Why? 

**Why #1**

**Question #1:** Why were residents evacuated to the street and not put in the van? 

**Answer:** The van was in the shop being repaired and wouldn’t be returned until the following day.
The answer to the first question should lead you to the next question.

If the answer to the first question had been different, your second question may have been different as well.

For example, if someone had borrowed the van for the evening or if a third staff person had taken someone to the emergency room in the van, your second question would need to address those actions.
Again, the answer to the second question leads you to the third question. You have more information now, but not the root cause.

Why #3

**Question #3: Are there procedures for evacuating people in inclement weather when the van is not there?**

**Answer:** Yes. Everyone is supposed to evacuate to the house across the street but the neighbors were out of town to visit family for Thanksgiving.
By the 4th question, you’re getting close, but you still only have reasons for why something wasn’t done, you don’t have the root cause.

Now, you’ve addressed the van, procedures, and staff actions, what's left? What might have prevented this event that didn’t happen?

**Question #4:** Why didn’t staff check with other neighbors to see if they could take someone in?

**Answer:** The residents were highly agitated. Staff were afraid that if one of them left someone might run away or become aggressive.
Emergency drills.

Now we have the root cause of the event.

The root cause is not that there were no emergency drills. The root cause is that there were no emergency drills because the home’s policies and procedures are based on what is required by external regulatory agencies and not on what the home deems to be important.

In other words, if it’s not required, we don’t do it.

It would have been easy, after the first four questions, to say, “Oh wait, this could have been prevented if we had conducted emergency drills,” but that would not have taken you to the root cause of the problem.

And, in this case, the root cause poses risks beyond just evacuation drills.
The root cause you uncovered – that policies and procedures are based on external regulatory requirements – is not limited to emergency evacuations but your statement of cause must address this particular serious incident.

What caused this event or, what could have prevented this event?
Before we develop our causal statement, let’s look at some bad statements of cause.

There is always a root cause. You may not need to dig deep to find it, but there will be a root cause.

The intent of the root cause analysis is not to find out what was done or whether procedures were violated or if staff acted or failed to act, the purpose of the root cause analysis is to identify systems issues.
These are examples of good cause statements because they recognize the immediate issues –

- instructions were misread,
- evacuation was delayed,
- the wrong dose was given

But a good statement also identifies the systems issues –

- staff must work double shifts,
- fire alarms don’t have their batteries routinely changed,
- staff are required to answer the phone by the third ring.
The Statement of Cause for this Serious Event

The home does not conduct routine evacuation drills to identify and address issues that may arise during evacuations because it is not required to do so by external regulatory bodies.

Now let's take a look at our statement of cause.

It’s important to stay focused on this incident— the evacuation drills – even though the root cause may be more far reaching.
It’s not enough to identify the root cause of an incident, you need to take action to prevent the incident from happening again.

In our example, the action was to hold routine evacuation drills.
There are several things that the home in our example can do to ensure that a similar incident doesn’t happen again. At a minimum, the home should begin to hold routine, unannounced evacuation drills.

The home’s Manager could meet with staff after each drill to ask, “What if?” That may generate some ideas for how to help ensure the safety of all residents and staff when an evacuation is required.

The administrator needs to make sure that there is always a vehicle on site.

It would be good to post the evacuation procedures somewhere. In this case staff knew what to do, but new staff may not have been able to respond as well.

And the Root Cause Analysis played an important role in bringing these problems to light.

This was a wake-up call for this home and it should result in an increased focus on the need for a comprehensive evacuation program in the event of an emergency.
As part of your root cause analysis you uncovered the immediate problem that led to this incident—no routine evacuation drills.

But you also uncovered a more far-reaching problem— that the safety program is based almost exclusively on what is required by regulatory agencies and not by good practices.

It is important to address the larger issues as well as the immediate issue.
Making changes is an important step but making sure those changes are effective and that you sustain those changes is equally important.

It’s not enough to conduct emergency drills for the next six months, you need to make sure that the drills are ongoing.

It’s not enough to say that you’re going to improve the resident safety program – you need to take action, make changes and monitor those changes to make sure they are implemented, effective, and sustained.

And if something doesn’t go right, then change it and keep monitoring.

Identify a problem – plan for change – take action -- monitor

It’s all part of the risk and quality management process.
There are many resources on the web for how to conduct a root cause analysis. Here are but a few.

Thank you for viewing this webinar.

We hope you will take the time to view other webinars in our Risk and Quality Management Webinar Series.