

Welcome to Section 2 of Root Cause Analysis. In this section, we are going to provide an example of using a Root Cause Analysis and a Fishbone diagram tool to help us understand better how a root cause analysis, which delves into the multi, many factors of a particular incident and can help understand the incident and understand how to change systems to reduce the likelihood of incidents happening in the future. Before we get into this, it's important to talk about the fact that there's a distinction between an investigation and a root cause analysis process. In an investigation, which is typically happens immediately after a significant event or adverse event. There's a focus on what happened and who was responsible. Typically there's an emphasis on facts, findings, culpability, or blame. And in intellectual developmental **disabilities** organizations, typically the focus is on staff or staff error. Root cause analysis has many of the same features but has a different purpose and approach. In root cause analysis, the focus is on gathering what happened, but actually diving deeper into understanding why something happened and how it can be prevented from happening again. As I mentioned, these are related activities, but they really have a different process as, as people go through them. There's an emphasis in root cause analysis on system factors that contributed or caused errors by people, certainly. But the aim is not to affix blame to a particular individual. The aim is to understand systems or particular issues that could be identified as the root cause and could be improved to avoid the likelihood of such a thing happening again. Root cause analysis is a thorough examination of cause and effect relationships. So it requires a robust analysis of both human factors, organizational factors, a formal and informal processes that actually exist and guide how a system operates and is organized. The biggest and most important question in root cause analysis is **"Why?"** As teams go through root cause analyses, they ask a series of why questions over and over again to identify potential contributors and then to start identifying solutions once the contributors have been discussed. So we will spend a little bit of time with an example. This is an **example that** may seem familiar to some people who are involved in supporting people and, particularly, around transportation. This is an example of which, a compilation of a few different known events that we have, we have studied and that we have worked with teams to resolve. In this particular event, a transportation wheelchair was used and the wheelchair slipped off the van **ramp** during transportation. The person who was in the wheelchair fell back off the ramp from a height of about two and a half to three feet and the person hit their head as they landed, lost consciousness, and was transported to a hospital. After treatment, the person was ultimately discharged, but have sustained a concussion. When the agency was reviewing this, this was considered a a near miss, a certainly a serious event that could have had an even more serious outcome. For this reason, the agency decided that it was **going to be** important to engage in a root cause analysis, to examine all the factors that had come together to cause this event and to try and understand what would what the issues were that were driving some of this? There were certainly staff involved. Yes, there were staff involved. We'll talk about that in a little bit but there were many, many, other factors that came forward. In the investigation, items/the main points that came forward were that a loaner transport wheelchair was used instead of the walker that this person typically used to walk onto the lift, onto the transportation van. The person's regular support staff was not available. And so the person was working with someone who did not know them that well. When the wheelchair began to roll backwards, staff did attempt to stop the wheelchair, but it slipped off and **the** wheelchair fell back, nevertheless. There are protocols indeed in place for using **this** wheelchair lift that require a latch of a wheelchair. However, this loaner wheelchair did not have an easy place to clip the latch to. And the staff felt that they did not have a way to attach the latch so proceeded with

using the lift. Investigation found that all staff and drivers did indeed have the necessary training and important protocols. So the team decided to use what is called a Fishbone diagram. This is also referred to sometimes in quality monitoring world as a Ishikawa diagram. The Fishbone diagram provides a visual means to identify and group some causes, group causes that may come up. What's really important about the effective use of the Fishbone diagram is that it does help teams who are doing investigations and then understanding root causes to break out of ruts and move away from assumptions around some facts. Repeatedly asking why helps to get to further levels. And once multiple and potential contributing causes are identified then the team as an opportunity to review and focus in on root causes and appropriate actions. Now this activity can take many sessions actually to develop, collect all the information, to review it from multiple different angles. What I will do is we will do a brief overview just as an example, to give our viewers a view of how this could be done. So a team that is working together, approach this by identifying the Fishbone that they're working on was the end result of the end, the fall from the van lift, was where they wanted to focus. What they started with was identifying the main items that they want to focus on. These are quite typical for Fishbone, including the methods or protocols, focusing in on equipment, staff or personal factors, environment, materials. Were there enough materials? And then also collecting the information about what can be measured. What do they know what could be measured? So in discussion, as all of the investigation was reviewed and then follow-on discussions with with people involved met, people found that yes, there were protocols and certainly there were protocols that identified that there should be brakes used on the wheelchair. There were indeed brakes but they had not been applied in a very firm way. There are protocols around lift use. And the lift use protocols did were actually followed with the exception of, as I mentioned, the use of the latch. When we focus down in on equipment, we found that the equipment used at the time, the latch where it would be attached was actually rusted. And this was one of the factors that staff later mentioned that they found that they were not able to make a good attachment because the latch seemed to be rusted. The other important thing that was identified is that the person who was being transported was using a wheelchair and not the regular walker that she used. And this is important because the person themselves was used to directing their own support and because their walker had needed repair and they were using a loaner wheelchair. And so there was not the typical transport process being used. When we get to staff and personnel, some of the items that were identified was that there was a new driver. Staff were experienced however they were not familiar to the person. When we look at the environment, well, the van was parked outside typically, and that had contributed to rust rusting on the latch area. Apologies for my writing area, where I am writing here. And at the time when the transport happened, it was actually a crowded area and it was distracting. There was a lot going in the area. Looking at measurement. Well, there was completed training. So training had done, three years ago. Training, which was indeed within the expective protocols for staff training for that kind of staff training. There was a safety inspection that had been done. Inspection. One year old. No mention of the latch that was rusted. When we get to the materials training resources. Well, the team review, there were a number of training resources that included folks for transport, for staff, for individual. Individual. And this is important, as I've mentioned, this person directs their own care in many cases and they have a good awareness of the protocols. The issue was that they were not using their typical wheelchair. Their walker was in need of repair in a very long time actually. And so they were without their typical mobility equipment. This is an area in which the, the team spent a fair bit of time focusing in on the walker needing repair

and identify that this was an issue that was actually affecting a number of people who were served by this agency. In part because of some challenges around appropriate access to repair for assistive technology and, and this kind of durable equipment. So there are a number of issues, as you can see, that were identified here through all of the process. Apologies for, for the mess here. And that takes us to an example here where we pretty much have what, what we just described. The main thing to focus in again on is that the walker needed repair. And the team also spent a fair bit of time focusing on the fact that safety inspection did not include the latch and went on to find that safety inspections should include all equipment and latch and understand that that's something that they should be given feedback on for the safety inspection. So for this particular root cause analysis, what's important to note is that there was multi-stakeholder involvement. Reviewing all contributing factors, identifying the contributions of each made, and then ultimately identifying primary or root causes. This took several rounds and groupings of causes as, as the teams work together and with the time we have, we're not, we're not able to go through all of this but what was important is that people kept asking why did this happen? And following up and digging a little bit deeper to understand. In this particular case, there were efforts there was a quality improvement effort actually that was developed to focus in on delays in mobility equipment repair, which was causing a systemic risk throughout the system and was actually introducing risk for this person and for others. So just to make the point again, that Root Cause Analysis is a deep dive into particular events with the purpose of identifying risks, and making changes to avoid bad things from happening again in the future. So just to recap again, Root Cause Analysis helps us to learn after an adverse event to make changes so that they will not happen again. It's not the same as investigation. Investigation provides information that is useful for Root Cause Analysis but there are continued, there's continued information needed to be gathered for root cause analysis. Tools like a Fishbone diagram, which I've demonstrated, can help groups to identify the most important factors in adverse events. And Root Cause Analysis helps to understand which were the most important factors through multiple rounds of questions and develop changes to reduce the risk of adverse events. Thank you and I hope that this has been a useful introduction to Root Cause Analysis and Fishbone diagrams. The resources are available here and can be shared for a deeper dive. Thank you.