



SAFETY LEADERSHIP STYLES

And their impact on
group incident rates



Introduction

Well run safety organizations hold their leaders accountable for the personal safety of those working in their areas. While establishing accountability is important, most leaders remain ignorant regarding what this means in terms of their evolving safety leadership. Do they possess strong safety leadership traits already, or unknowingly, do their leadership styles increase the exposure of their teams? How do leaders get an accurate assessment of their current safety leadership?

Talagy pioneered the research regarding the psychology of safety. This work encompassed discovering those personal leadership and safety traits that would be predictive of group incidents. While most experts knew that safety incidents were not spread equally across the population, the role that leaders played in either decreasing or increasing site exposures and associated injuries, remained ambiguous. The fog is now lifting as research data shows a strong correlation between safety leadership profiles measured through interactive assessments and group incident rates. In this paper, readers will learn the makeup of a safety leader profile, and its accuracy in predicting group incidents.

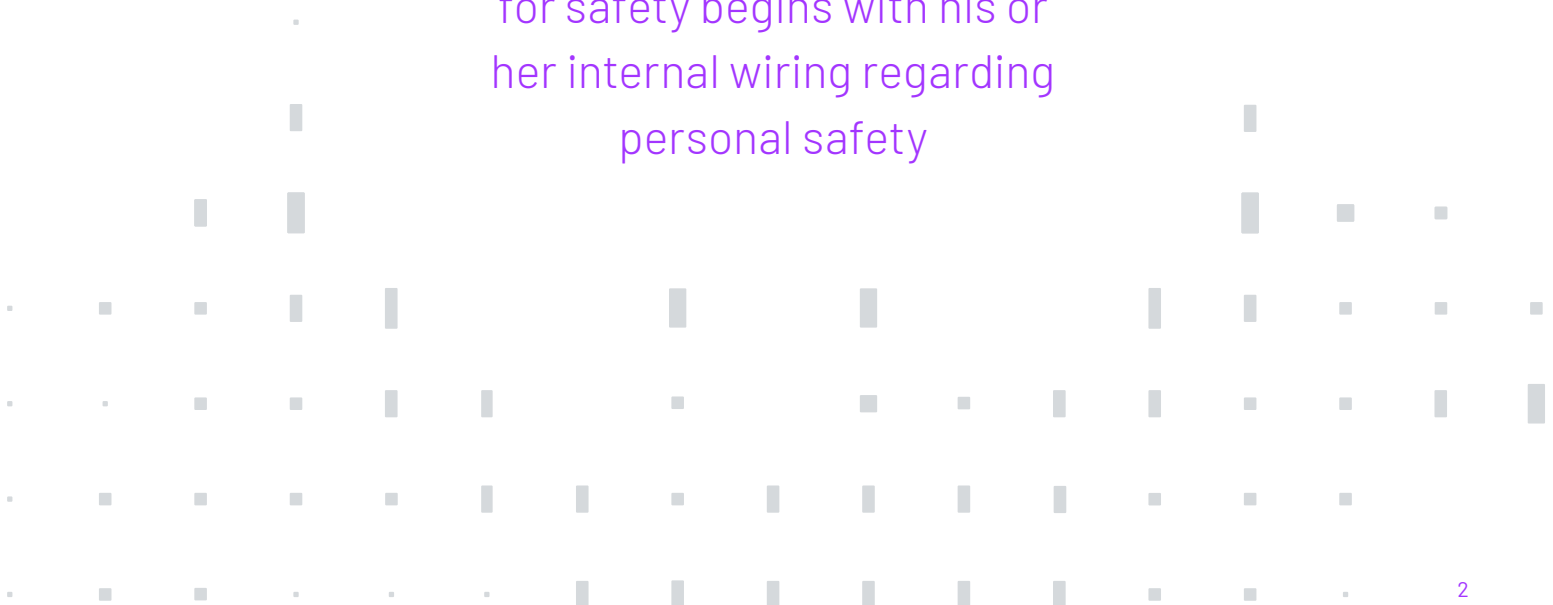
The gap between strong safety leaders and the rest is significant in terms of safety incidents. Therefore, understanding from where leaders are starting their safety journey is a prerequisite for effective safety leadership development. With such differences in leadership and personal safety traits, the time has come to rethink how we develop leaders for safety purposes.

If we start with soft-skills leadership training, we make an erroneous assumption that the leaders have similar safety leadership profiles and therefore will behave in a like manner once they come out of the training. Conversely, by starting first with understanding the leader's innate traits, and then following that up with training and coaching, the development experience now becomes personal.

Of particular interest in the research is the role that the leader's SafetyDNA has on group incident rates. How a leader ultimately leads for safety begins with his or her internal wiring regarding personal safety. Never before have we expanded the assessment of leaders to include their unique SafetyDNA. This addition, you will learn, has increased the accuracy of the safety leader assessment significantly.

In summary, having strong safety leaders is what every organization desires. The journey to achieve this goal begins with understanding the individual leaders, and their unique safety leader profiles. Once this happens, the leaders have that "ahh-ha!" moment where they better understand their current leadership behaviors, the implication for their people's safety, and what they feel compelled to change. The difference now, is that the impetus to change is not an external program, but an internal understanding of themselves. In other words, we've finally made safety from a leadership perspective – personal!

How a leader ultimately leads
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Safety leadership profiles and group incident rates

Matt finally got the recognition he deserved for turning around the assembly plant, that for years, seemed to run in the red, and had a poor safety record to boot. In appreciation, his company sent him and his wife to Hawaii for a well-deserved week of rest and relaxation. It was at this time, his world would turn upside down. On the second morning there, he awoke to a text that simply said, “We’ve had a serious injury – please call when you get this.” Matt frantically called his safety manager only to find out that one of his seasoned maintenance workers fell off of a 10 foot ladder, landed on his head, and was in ICU. Matt felt horrible, especially since he had authorized a new ladder safety program that had been delayed due to scheduling issues. Matt asked his safety manager, who lobbied hard for the new ladder safety program, if it would have prevented the incident. The reply came quickly and with confidence, “Absolutely!” As Matt sighed, now feeling even more culpable, the safety manager remarked, “...but honestly, the current guidelines for ladder safety would have prevented the incident, if only the individual would have followed them.”

Matt, like many leaders, did not fully grasp how his leadership style impacted the safety culture and behavior of the workforce. Upon further investigation, he would learn that while he was physically on site, his leadership team, for the most part, enforced the established safety protocols. However, he came to find out that employees’ safety behavior changed when he and other senior leaders vacated the site. And this change in behavior was not just with the hourly employees, but with the front line leaders who tended to look the other way as long as the work was getting done. In other words, there existed two safety cultures at the site: the formal culture where

everyone knew and followed the safety protocols strictly, and the informal one where there existed more latitude for the individual to work as he/she felt comfortable. And just like we all know, the real test of a safety culture is how employees behave when no one is watching.

Determined to understand how this could happen, Matt eventually turned his pointing finger at himself to figure out his responsibility in this matter, but struggled to think of what he could have done differently. What did he say or do that would make the workforce think that safety rules were really more guidelines versus non-negotiables? That safety took a back seat to production? Or, what really mattered was cost containment, period! He never directly said any of those things, yet somehow those messages got out to the workforce.

As part of the discovery process, Matt, along with his management team, experienced an interactive safety leadership assessment and development program by Talogy. The goal being to understand the traits leaders possess that reduce or increase their employees’ exposures to risks, how to develop these safety traits, and apply them in the workplace. The online assessment lasted an hour, though the findings would remain indefinitely in Matt and his leadership team’s minds, serving as the catalyst for their change in safety leadership.

This white paper focuses on the traits that contribute to strong safety leadership. In this process, we will reveal a decade of behavioral safety research that forms the basis of the SafetyDNA® for Leaders Development Program. As you read through this white paper, you will learn that strong safety leaders possess unique leadership and personal safety profiles.

Below are the key areas we’ll review:

1. **Leader profile and results:** review of the innate leadership traits that impact a group’s safety
2. **Safety profile and results:** review of the innate SafetyDNA traits that impact a leader’s personal safety
3. **Safety leader profile and results:** combine both profiles together to provide a robust predictor of how a leader will lead for safety

Part 1: the leader profile

Anyone studying leadership concepts over the last three decades knows that a myriad of books were, and continue to be, written about this subject, and for good reason. More than ever we know from our research there is a strong correlation between leadership styles and employee performance. Joseph Rost's definition in *Leadership for the Twenty-First Century* put it well, explaining that leadership is an influence relationship, where leaders intentionally influence followers to achieve real behavioral change that reflects their mutual goals (Rost, 1991, p. 102). Personal safety on the surface seems to fit the mutual goals that both leaders and employees share.

When we began our research a decade ago on safety leadership, unexpectedly, we noticed an absence of empirical data on the relationship between leadership traits and group incident rates. This was surprising because so much research exists in other areas of leadership and its impact on employee performance. What more critical role do leaders play than ensuring the safety of their teams?

We knew intuitively from examining mounds of incident data, that leaders impact employee safety performance, so where was the empirical research to substantiate this? Additionally, the incident data (the criteria) needed to run validation studies, most well-run companies already had, in some form. A partial explanation for this phenomenon has its roots in the types of companies that traditionally work in the safety space. Most behavioral based safety companies come from human resources training backgrounds and are training companies. This is in comparison with testing and assessment companies that build interactive assessments that measure human traits and correlate those traits with on the job (safety) behaviors and ultimately, injuries. This difference is significant, and limits training companies' efforts to build assessment tools and conduct validation studies. With Talogy's background steeped in testing and development, conducting validation studies would not be an issue.

As a first step, we needed to develop a safety leadership model to test. The R&D team analyzed various leadership models developed internally over the past two decades, and finally chose one that had its genesis in the work of psychologists Bernie Bass and Bruce Avolio. Their research on transformational

and transactional leadership, along with the famous Multi-factor Leadership Questionnaire (MLQ) provided a solid platform from which to launch our safety leader research. Previously, we were intimately involved with the MLQ assessment, had conducted validation studies with it, and therefore, knew it was sound. Since that time, our leadership assessments continued to evolve, though until now, none were validated using group safety incidents as the criteria.

The model reduced the complexities of leadership into four primary styles. It is based on two primary concepts. The first, we refer to as Process or Results Focused, which is the extent to which the leadership style is emphasized following a specific process to obtain a favorable safety result. The second, is People Focused. This emphasizes the human relationship or people side of leadership and the extent to which the leader feels the need to develop personal relationships to drive employee safety performance.

As the model shows, the four styles combine the two factors (Process and People Focus), rating them as higher or lower. The model purposely avoids the use of complex and technical terms to allow participants easy ingress into the world of safety leadership. Using descriptors such as Overseer, Transacter, Relater, and Transformer helps leaders quickly grasp and remember their dominant leadership style. For instance, a Relater is a leader high on the personal relationship side but can struggle with holding individuals accountable for following a specific work process.

It's important to note that each of these leader profiles has strengths and blind spots when it comes to leading for safety. This four-box model with descriptors works well for training purposes because of its simplicity, intuitive connection to group safety, and leaders quickly understand and relate to their profiles. It needs to be noted that participants always take the SafetyDNA for Leaders assessment first, which provides their leader and safety profiles.

To increase the odds of the safety leadership assessment being predictive, the research team adapted the model to more closely fit, not simply a generic leader, but specifically, a safety leader. Let's now take a look at the model.

	Lower people	Higher people
Higher process	Transacter Strengths: Sets clear expectations and focuses on achieving results in a timely manner Blind spots: Seen as demanding or insensitive to needs; struggles to build strong relationships	Transformer Strengths: Results-focused while building personal relationships; inspires others Blind spots: Pushes some too far outside their comfort zone; may be perceived as idealistic
Lower process	Overseer Strengths: Provides autonomy and avoids micromanaging Blind spots: Trusts people to a fault; may appear detached with unclear performance expectations	Relater Strengths: Fosters employee morale and builds strong relationships; quite likeable Blind spots: Struggles to set clear objectives and consequences; difficulty discussing performance

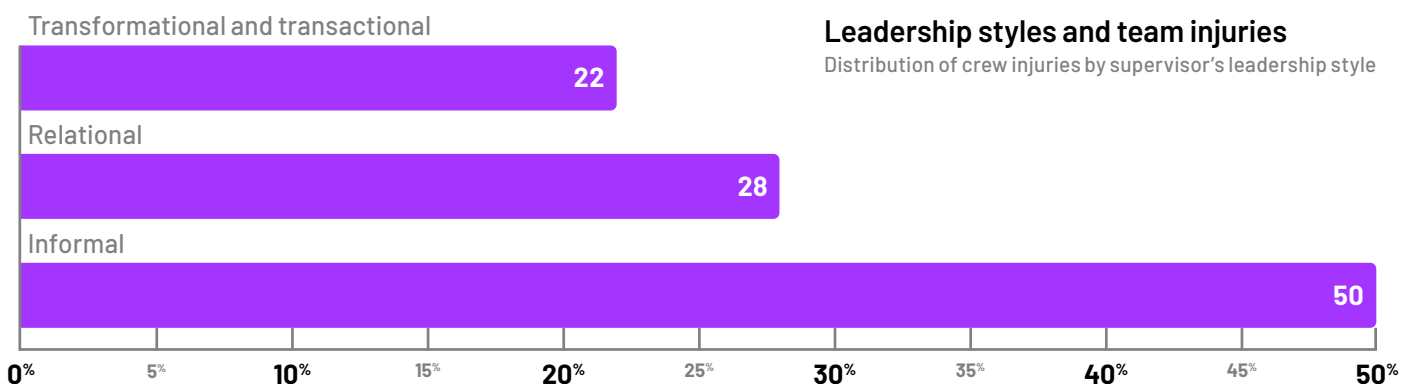
Results supporting accuracy of leader profile

To validate the leader profile, we assessed approximately 200 leaders. At the same time we were provided incident data for each leader's group or team. Here are the key findings from this validation study.

Overseer profile: Leaders with this profile accounted for slightly more than half of all the injuries in the study. We suspected this style would be associated with higher incidents than the others, and it clearly was. This leadership style tends to trust employees to a fault, and be more reactive in addressing safety issues. This leader is hands-off and lets his team do their work and may say, "If you need me, you know where to find me – otherwise I'll assume you're good."

Relater profile: This profile was associated with about a fourth of the incidents in the study. Leaders with this profile work hard to develop positive relationships and can struggle holding their people accountable for following specific safety guidelines that employees may view as onerous. For instance, telling a maintenance worker to get down from the ladder and put on a safety harness before advancing with the repair, may not be something this type of leader feels comfortable doing.

Transacter/transformer profiles: The research shows that both of these profiles are strong in terms of driving employee safety performance. Both profiles did very well in terms of predicting low group incident rates. Specifically, both profiles combined only accounted for a mere 22% of all incidents in the study. Initially we expected to see fewer incidents with the Transformational Leaders vs. the Transactional Leaders, but the results in this study did not support this. Both profiles performed equally well in terms of having very low incident rates. It seems that a key factor in reducing group safety incidents relates to the leaders' ability to ensure employees follow all safety guidelines – no exceptions!



Part 2: the safety profile

It was 4:30 AM, and my wife and I were sound asleep – that was until my cell phone began vibrating with a text message from our son in Nashville. It simply said, “The fire alarms are blaring in my apartment complex, it’s 22 degrees outside, and I’m standing on the sidewalk with 30 others – I’m fine.” While feeling relieved no harm had come to my son, I couldn’t help but wonder where the other 670 tenants happened to be. After all, his apartment complex housed over 700 individuals. So I asked and he replied, “They’re all inside.”

This situation describes well what we see in our research into personal safety. There is an enormous gap between knowing what we should do to reduce our exposure to risk (evacuate), and in fact, taking the action to reduce the exposure. We continue to be fascinated by how the brain works to essentially rationalize higher risk behavior – but at different levels, depending on the person’s psychological makeup.

While it doesn’t come as a shock that the majority of the apartment dwellers found a way to rationalize staying inside their warm apartments while the alarms blared incessantly in their rooms, it may surprise you, the variance in their actual behaviors. Being in the safety field, I couldn’t pass up the opportunity to have my son informally speak with some neighbors to gauge not just their decision to stay inside or stand outside in the cold, but more importantly, how they rationalized their behavior.

He explained that some neighbors got up, checked out their surroundings for danger signs (smoke, fire, etc.) to validate the alarm, and after seeing none in the hallway, returned to their apartments to sleep. Some stayed up looking out the window to monitor the situation, just in case. However, more people he said quickly and conveniently assumed it was a false alarm, covered their heads with a pillow, and cursed the alarm that seemed to go off monthly, for no apparent reason. He concluded by saying that everyone he spoke with reasonably explained their actions once the alarm sounded, and they all said if it happened again, they’d do the same. After all, no harm came to any of them. By the way, there was no fire, but instead a water line had burst, flooding a few apartments. With such a wide range of reactions to an imminent threat (blaring fire alarm), the question must be asked, “why?”

At this point, we need to address a simple misconception when it comes to personal safety, and that is the role of safety training. This comes under the common myth heading, if they knew better, they’d do better! In studying safety investigation reports, we rarely see that the

Something critical is missing from the way companies approach personal safety



principle culprit centers on a lack of safety knowledge or training. Meaning most safety incidents could NOT be eliminated if people just had more safety training. While safety training remains a critical piece in the safety equation, it clearly isn't enough. Nor would rewriting standard operating procedures to include additional safety precautions do the trick.

Something critical is missing from the way companies approach personal safety. What we discovered is that few companies really take into consideration the personal element of personal safety. Meaning, site safety, even with all of the safety training and detailed standard operating procedures we cram down employees throats, still comes down to continual personal choices. And as we all know, those personal safety choices individuals make vary widely – even when everyone received the same safety training!

To build on this point, coincidentally, the same Saturday night my son's fire alarm went off in Nashville, my daughter had a fire alarm go off in her dormitory in Boston. To put this in perspective, this is February, and Boston is covered in six feet of snow. So I asked her, how many students went out and stood in the snow at 2:00 AM? She quickly replied, "Everyone!" As I shook my head in disbelief, she remarked, "When the alarm goes off, the R.A.s go through each room, and if they find you, the fine is \$200." Interesting how safety behavior changes when personal safety no longer is the key motivator. In this situation, "will I get caught?" and "what is the price if caught?" were first and foremost on the students' minds. Finding out the real motivators behind a safety culture is key to understanding if it is real, and if it is sustainable. This new understanding of personal safety is transforming the safety industry.

If we hope to unmask why certain people voluntarily take actions that increase their exposure to injury, we must first understand the psychology of personal safety. As you enter this field, there is one truism you must not forget; that not only are people who work for you not equally safe, the range of (un)safe behaviors they will use varies widely based on their psychological makeup.

Let's turn now and focus on the research into the psychological traits, or SafetyDNA, that helps explain why people behave as they do when it comes to their personal safety. The psychologists at Talogy now have over a decade researching and refining a safety model that helps explain what traits comprise one's SafetyDNA, and how these influence personal safety.

Staying with the theme of keeping it simple, we'll limit our review in this paper to four key safety traits that make up the core of SafetyDNA. In reality, the SafetyDNA model is more complex, but this will provide an easy way to understand the constructs on which it is based.

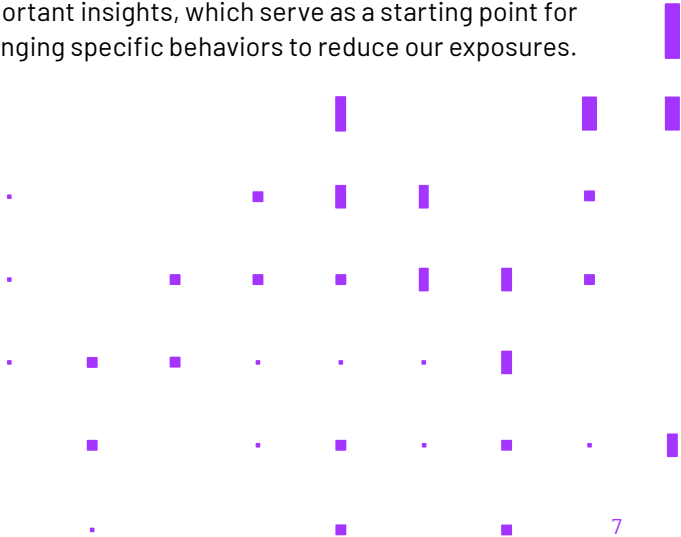
SafetyDNA is comprised of the following personal traits:

- 1. Control
- 2. Awareness
- 3. Rules
- 4. Caution

If you are high in these four areas, you will have significantly fewer personal injuries than the average person. The lower you are in any of these areas, the more likely you'll have increased exposures and associated personal injuries.

Let's examine Marlene's situation to understand this better. Marlene supervises a team in a distribution center where trucks load and unload constantly. Unfortunately for her, she lacks strong awareness and frequently doesn't even get to decide whether she'll take a precaution to reduce her exposure because she often doesn't see exposures in the first place. Or if she sees them, she gets easily distracted and forgets. Then, bamb! She steps backward and trips over a pallet behind her. She might simply account for this by saying she's somewhat absent minded. Yet the truth is better explained when we examine the underlying awareness traits, and help her understand more specifically what likely is happening. In Marlene's case, we found a combination of issues with short term memory, being easily distracted, and cognitive overload. Now having confirmed the areas needing attention, we can work with Marlene to take specific actions to improve her personal safety in her work environment.

Accurately assessing SafetyDNA traits remains a critical first step in the personal safety transformation process. Just being aware of our unique SafetyDNA provides important insights, which serve as a starting point for changing specific behaviors to reduce our exposures.



Results supporting accuracy of safety profile

In this study, we looked at 800 individuals at five different organizations. All took the SafetyDNA assessment, and their employers provided 2.5 years of incident data for each person in the study. Based on their assessment scores, participants fell into three distinct safety groups, and below you can see percentages that fell into each.

- **High risk group (~20%)**
Likely to have high injury rates due to overall low SafetyDNA scores.
- **Moderate risk group (~50%)**
Likely to have average injury rates due to overall average SafetyDNA scores.
- **Low risk group (~30%)**
Likely to have low injury rates due to overall high SafetyDNA scores.

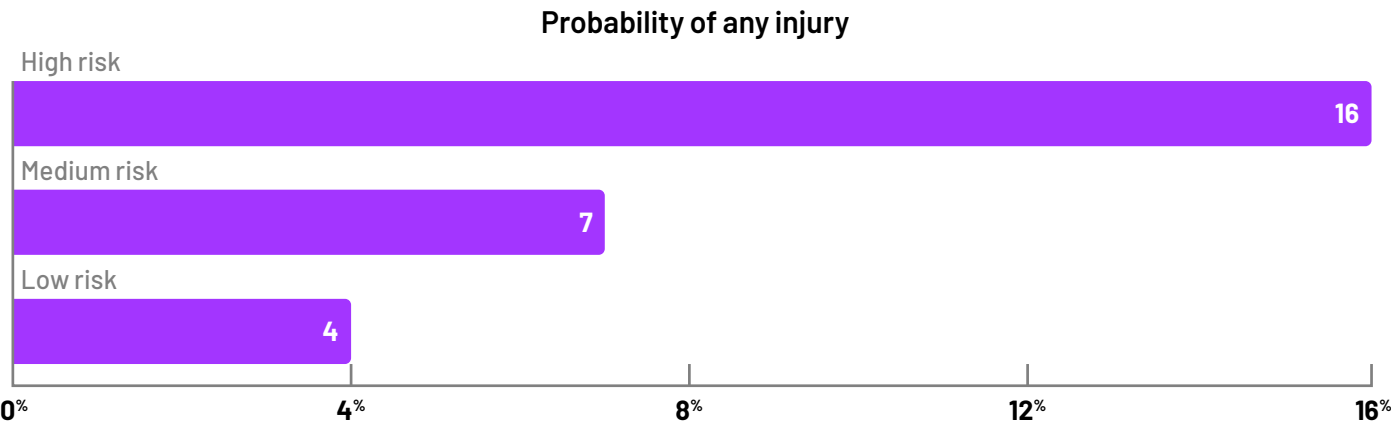
The variance, meaning how they responded to test items between each of these three distinct groups, was compelling and significant. Now we needed to dig into the data and see if incident rates between the groups were significantly different. Meaning, those with lower SafetyDNA, according to the test, actually had significantly more incidents than the other two groups. When the R&D group submitted the initial draft of the results, the response from senior management was, “there must be a mistake – these correlations with safety incidents are extremely high.” After redoing the analyses a second time, everything was indeed accurate, and here is what we found.

This data set was extensive enough that we could divide it into two distinct categories and conduct two validation studies. The first being the probability of any injury occurring within these three groups, and the second being restricted to the probability of just serious injuries or recordables occurring.

When looking at the likelihood of an individual being involved in any type of injury, each group reported the following results:

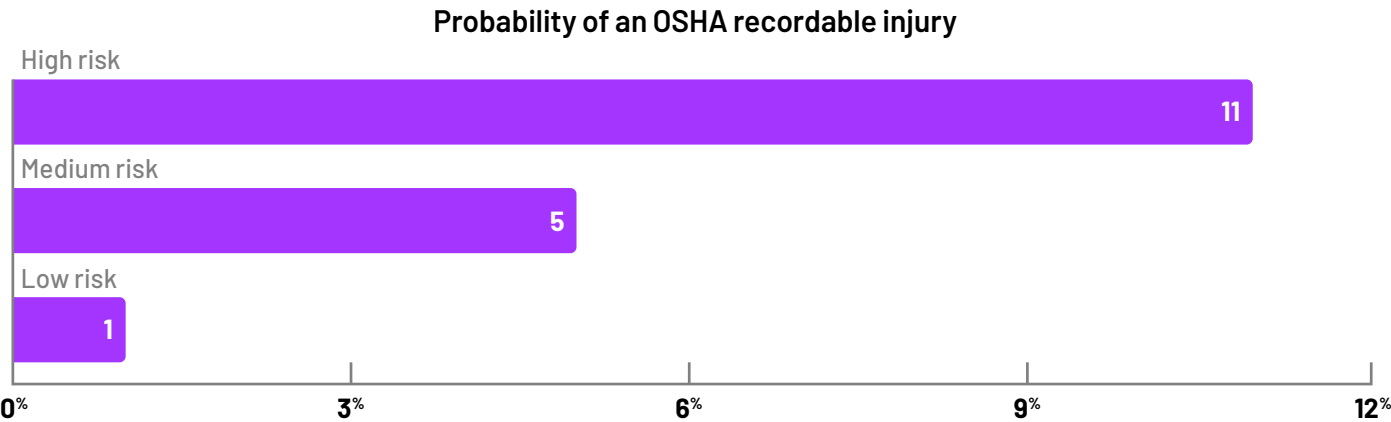
- **High risk group**
16% of individuals in this group had some sort of injury during the 2.5 year period.
- **Moderate risk group**
7% of individuals in this group had some sort of injury during the 2.5 year period.
- **Low risk group**
4% of individuals in this group had some sort of injury during the 2.5 year period.

To put this into perspective, a person in the High Risk Group was more than TWICE as likely to have an injury as a person in the Moderate Risk Group, and FOUR TIMES as likely as a person in the Low Risk Group! If the difference between these groups had been 20%, that would have been wonderful to predict. However, seeing a difference of 200% and 400%, clearly shows that this model that accounts for one’s SafetyDNA is strongly correlated with actual personal safety behavior and incidents.



While those results are impressive, the separation between each of the groups would grow exponentially when we examined only the serious injuries. We found the following:

- **High risk group**
When an injury occurred, 11% of the time it was a serious injury.
- **Moderate risk group**
When an injury occurred, 5% of the time it was a serious injury.
- **Low risk group**
When an injury occurred, less than 1% of the time it was a serious injury.



To put these findings into perspective, a person in the High Risk Group was ELEVEN TIMES as likely to have a serious injury as a person scoring in the Low Risk Group! As we looked deeper, it seemed that those in the Low Risk Group not only had far fewer incidents over all, but individuals in this group rarely suffered a serious injury! The High Risk Group had just the opposite situation, accounting for the vast majority of serious injuries.

This research area of SIFs (Serious Injuries/Fatalities) is of particular importance today as government data shows little reduction in their numbers over the last decade. The good news is, now we can identify those individuals most and least likely to experience an SIF, and take positive steps to reduce them.



Part 3: safety leader profile

You likely have figured out by now that the safety leader profile combines the two previous profiles together. This combination of Leader Profile plus Safety Profile provides the most robust predictor of how a leader will lead for safety. While on the surface, everything is intentionally simple, it's helpful to see how many elements actually play in determining a safety leader's profile.

1. **Safety profile:** comprised of 10 SafetyDNA competencies
2. **Leader profile:** comprised of 13 safety leadership competencies
3. **Safety leader combined profile:** comprised of 23 competencies and 16 unique profiles

In developing this program, the level of assessment detail was a challenge to create without making the SafetyDNA for Leaders assessment take an eternity to complete. With advances in automated assessment technology, over time, the assessment was reduced down to 60 minutes, while increasing its accuracy.

One area of interest leaders like to understand is, now that they have their profiles, what might that mean in terms of how their groups will perform from a safety perspective if nothing changes? In other words, how does their safety leadership profile impact their group's personal safety? To illustrate this, we take the combined score from their safety and leader profiles and place it along a continuum from high to low team risk exposure, as shown in the graphic below. The focus here is potential risk to the leader's team members. While no one is immune to injuries, our research indicates that leaders with higher exposure scores are statistically more likely to have incidents on their team if they do not change leader behaviors in certain situations. This visualization helps leaders see that this isn't merely a personal test score that they can throw in a drawer. The way a leader leads for safety directly impacts their group's personal safety, period! It is at this point, most all leaders ask, "What can I do that will improve my group's safety?" The good news is, a lot! Now that we possess a detailed breakdown of the leader's SafetyDNA and Leader Profile, the structure coaching conversation begins.



Results supporting accuracy of safety leader profile

To reinforce the importance of the safety leadership model, studies were conducted to understand the difference in incident rates based on how leaders scored on the entire assessment (Leader and Safety Profiles) and their groups' incident rates. This study took place in the power/utility industry, with 180 leaders. Leaders were placed into three groups based on their overall assessment scores:

■ High score group

These leaders scored higher on the SafetyDNA for Leaders assessment and their teams accounted for only 13% of all incidents.

■ Average score group

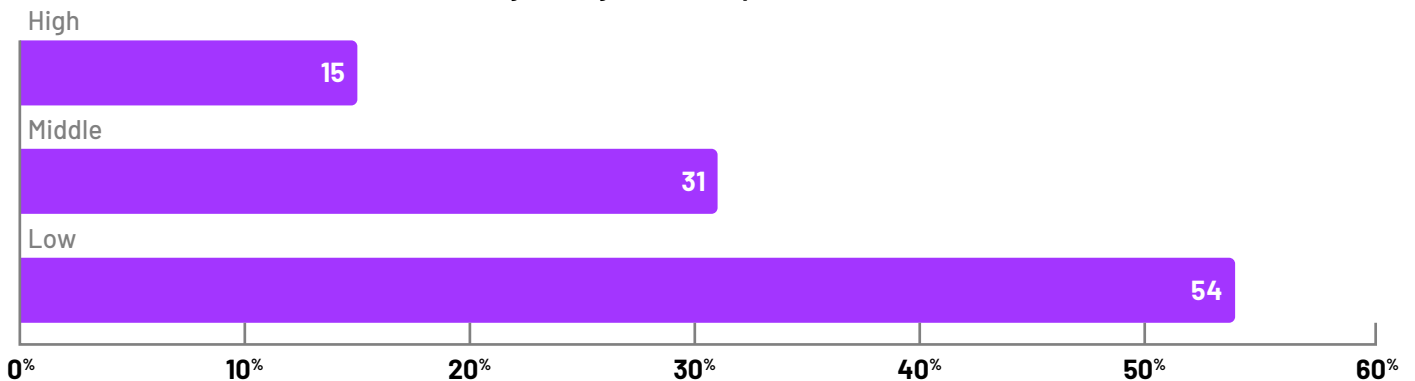
These leaders scored average on the assessment and their teams accounted for approximately 30% of all incidents.

■ Low score group

these leaders scored lower on the assessment and their teams accounted for approximately 54% of all incidents.

The take-away here is that safety leadership matters in a big way! Leaders with high safety leader scores had 3.5 times fewer incidents on their teams than those leaders scoring low in the SafetyDNA for Leaders assessment. This significant difference between these groups of leaders is a game-changer. Especially when taking into consideration that all leaders had similar safety training.

**Distribution of safety incidents
by safety leadership test scores**



Conclusion

To get at the heart of site safety performance, organizations must first start with the leadership team and accurately understand their SafetyDNA and Leader Profiles. Armed with this data, they can work intelligently to customize leaders' personal safety development plans that directly reduce employee exposures.

