Good day and welcome to this Health Catalyst webinar. Now, let us begin with today's webinar. A systematic framework for the delivery of safe, highly reliable care and habitual operational excellence, presented by doctors Allan Frankel and Michael Leonard of Safe and Reliable Healthcare.

Dr. Frankel is a founding partner at Safe and Reliable Healthcare and serves as senior faculty at the Institute for Healthcare Improvement. Dr. Leonard is a managing partner at Safe and Reliable Healthcare, an adjunct professor of medicine at the Duke University School of Medicine. Together, they have worked extensively to develop practical, comprehensive models that enhance patient and family centered care, effective leadership, a culture of safety, high reliability, and an environment of continuous learning and improvement.

Throughout today's webinar, you'll be presented with multiple poll questions. We encourage you to engage in those polls, as they will help to drive today's conversation forward. We also urge you to submit questions throughout the webinar by using the questions pane in your GoToWebinar control panel. We've also made the slides available in the hand-outs pane of your control panel.

We will be answering questions at the end of the presentation in a questions and answer session. We are also recording today's presentation. Shortly after the event, you will receive an email with links to the recorded on-demand webinar, the presentation slides, and a transcript. Also, you can follow us on social media. Our handle is @HealthCatalyst. I will now turn the time over to Dr. Leonard. Dr. Leonard, go ahead.

Today, we're delighted to be with you. What Allan and I are seeking to share with you today is really the culmination of probably 20 years of work within the world of patient safety and quality improvement. We've had the privilege of teaching in The Institute for Healthcare Improvement Patient Safety Officer course since its inception and trained over 2,500 patient safety officers. As we've done that, and we had the privilege of working with those folks working within healthcare systems, we really realized we need an effective functional framework, or roadmap, to guide people in this work. That's what we are going to share with you today. Next slide if you could, Chris.

Just to very briefly give you a sense of who the folks are that are talking to you on the phone. Allan started in patient safety within the Harvard hospitals. I started in patient safety for Kaiser Permanente and spend 10 years doing that across the organization.

We've been at this a long time. We've been in conversations around things like team steps and crew resource management. Long history working with the Institute for Healthcare Improvement. Allan, essentially, initiated walk arounds at [inaudible 00:04:09] women's hospital some 20 years ago. What we're going to share with you is the evolution of our work. Next if you would, Chris.

Our goal, in essence, in the next hour, is to provide a very practical framework for you that can be applied in any setting, whether it's a neurosurgical ICU, an office practice, or home care, or a pharmacy. To really talk about basic concepts of high reliability organizations in a very practical manner. If we think through the basic tenets of the joint commission model, effective leadership. What is that? What does it look like? What are the actions and behaviors associated with that?

Culture of safety. We've had a deep interest in culture for the last 20 years. Have measured culture in a couple thousand hospitals. How do you actually drive an environment of continuous learning and improvement?

Improvement is not an inherent skill among all our really dedicated, very, very smart health care folks, because it was not something that was baked into our DNA. But it's essential and a really key piece of organizational evolution and development. Then, to offer you some very practical tools and insights. Next, if you could.

We're going to share a framework with you that we published with our friends at the Institute for Healthcare Improvement. The white paper's on the left side, you can download that for free from the IHI, or we'd Be happy to send it to you. In an essence, what you're seeing on the right hand side is that model. Now obviously, everything is within the service of patients and their families. Pretty sacred trust that people entrust their lives and their well-being to us. If you think about this model, there's essentially three pieces.

From about 10:30 to about 4:00, those are cultural attributes. We've really come to strongly believe that culture is the glue. It's what allows groups of very smart people to have high degrees of social agreements or collaboratively together, if you're reliable and consistent in the care they deliver, and create value and learning every day. Leadership is a critical component of this. We'll speak to this in more detail. Then, in essence, the pieces in the blue essentially relate to the processes of improvement, measurement, continuous learning, testing.

Now, the reason these are all there is we really became came to appreciate over time that if you focused on one or two things, we're going to do leadership training, we're going to do teamwork training, we're going to do lean, and you did that in isolation, that was in essence well intentioned, but it was a science project. It was not sustainable improvement. It was not sustainable learning.

The reason we have this framework is that when you go into any setting, clinical or non-clinical, which could be a two-person office practice or a thousand bed hospital, these are the things we look at. These in essence, the same way clinicians look at organ function in patients, whether it's pulmonary, or cardiac, or renal, or GI, this is how we pay attention, assess, and learn about the places that were working. That we want to drive improvement.

Again, like organs in a patient, these all have to be somewhat healthy. They don't have to be, normal works, have high degrees of function, but if there's one or two or three that are pretty dysfunctional, it's very hard to drive sustained learning and improvement. It also provides us a very clear roadmap to move forward and do this work. Next if you would, Chris.

One of the things that we've really come to appreciate over time is this concept of a cultural maturity model. This has been around in the higher liability world for probably 40 to 50 years. It started in the 80s with a gentleman named Ron Westrum. People have been involved in this over time. It's essentially evolved as people really think about organizations, outside of healthcare, within healthcare, as how do they culturally mature in a way That they move from unmindful to generative.

Let's spend a couple minutes on this, because as we look at the various components of the framework, whether that's leadership without psychological safety, whether that's teamwork, whether that's

learning improvement, we can rate all of them on this maturity scale. Unmindful is essentially showing up and trying hard. Historically, if you think about how we've trained nurses and doctors, we've used the individual expert model. That says we put all these exceptionally skilled, dedicated, highly trained people together in very complex environments, and they'll just figure it out.

Well, the world of health care, the care we deliver today, is far too complex for that to be actually a successful solution. What we really want to do is do collaborative work. Highly skilled individuals, working collaboratively in complex environments. As we move from unmindful, the next piece to this is reactive, where we're learning every time something goes wrong or we blow it up. Systematic is really a pocket where we get it right, but that's not uniform.

Something really starts to change when you get to be proactive. If you think about it being an expert, what happens when you're come in, in the morning? You walk into the situation, your brain very quickly says, "I've seen this before. Is it good? Is it bad?"

You do the same thing with patients. You walk in a room, look at a patient, and your brain goes, "Really sick, a little sick, not sick." Because your pattern matching. You're using that prior experience to say, "I've seen this before. I liked it the last time. What is it? What's the problem we're trying to solve? Where are we going to go? What does success look like?" A critically important question. That is where can we get into trouble?

Where can we fail? Which is, a basic aspect of higher liability. It's not assuming everything's going to go well, but ultimately saying where can we get off in the weeds? Where can this go wrong? Let's think ahead and let's actually mitigate or preclude that risk. If you think about your daily experience, being reactive is coming in, not knowing the plan, having your day full of surprises, interruptions, distractions, and really avoidable surprises.

That's playing defense. That's not only exhausting, but it puts us at risk for making mistakes. Because we know when humans are interrupted, and distracted, and trying to multitask, they make more mistakes and they forget things. That's certainly evidenced by trying to drive your car and talk on your cell phone, or texting and driving, or even texting and walking. The question is how do we move from that to being proactive? Where we come in and we play offense.

You think about highly performing teams and organizations. They come together, they think ahead, they look at the environment, and they say, "What do we see? What are we going to do? Who do we need? When are we going to need it? How do we expect this to unfold?" That's not only a lot more fun. Actually, when you work that way, you walk out of the hospital, or walk out at the end of the day with a spring in your step, but you deliver considerably better care.

Thinking about this maturity scale ... Next slide if you could, please. One of the things we'd like you guys to think about, and actually have you tell us, is where do you think your organization is on this maturity curve? I'll hand that to you, Chris, to help with that.

Thanks, Dr. Leonard. We've made that poll available to you, if you can take a moment and fill that out. Again, where do you think your organization is on this maturity curve? Option one, unmindful. Option two, reactive. Option three, systemic. Option four, proactive. Option five, generative. We'll also remind you, you can see the slides in the handout's pane. You can ask questions in the question's pane of the

control panel. All right, here are the results. The results are 2% said unmindful. 49%, reactive. 29%, systematic. 17%, proactive. 2, generative. Dr. Leonard, what do you think?

I think these folks are very insightful. Let me give you an example. Allan, and I, and our group, four years ago, assessed 30 community hospitals for the state of Massachusetts, because they're obviously very mindful and concerned about the sustainability of high quality community care in an environment where lots of things are changing. A lot of systems merger, et cetera. In fact, your answers were very, very similar to what we found.

We found four out of the 30 hospitals, essentially 13%, 15%, were proactive to degenerative. We found the overwhelming majority were living down and reactive. But certainly, there were places where there are kind of pockets of kind of getting it right. We certainly know that culture lives, within organizations, at a unit level. You can find some places where that's obstetrical unit, or radiology, or GI, or a clinic where these people really seem to well organized. They work collaboratively.

You know they're playing offense, but they work in environment, where that is not, shall I say, consistent.I think, part of the value of having a maturity scale, and a framework, is essentially, you can kind of say, here's where we are. Where do we want to be and what are the explicit actions that we need to take, that are visible, measurable, and sustainable, to kind of move? Because you cannot, ultimately, be successful in a reactive mode. I mean, you have all these wonderful, smart people, who work extraordinarily hard, and they may be the most dedicated people in the universe, but that ability to come together, and think ahead, and play as a team, is absolutely critically important for the care and also for The ability to deliver safe care.

One of the things we hear time and time again is, "Well, you know, people change at different times. They come in, their shifts are not overlapping, or are overlapping. We don't get together. We pass on things. You know we can't figure out how to get together and spend five minutes." I mean, I was in an intensive care unit two days ago, and the doctors coming around, but they don't talk to the nurses. So, you know, I think what we would argue is, you're too busy not to do that.

Taking that two or three minutes to talk to each other, and say, what do you see? What do I see? What do we thinks going on here? Where is this going? What does success look like and where can we get into trouble is really critical. Now, a really important piece of that ... So, if we think about the difference between novices and experts. If you're expert, if you've done this for five years, 10 years, 20 years, you have a huge library of experience in your head. You've seen patients, with similar situations, hundreds, if not thousands of times.

You can walk in a room, and in about five or 10 seconds, your brain, very quickly, with about 90% accuracy, says, good movie, bad movie. What happens when we now are in a situation where the pace of care delivery is ramped up, the complexity of care delivery is increasing all the time, and we have lots of new nurses and new people in these complex situations? What's the blind spot for the newbies? The blind spot for the newbies is they're wonderful, smart people, but the library is pretty empty.

They can walk in rooms and look at situations that would be obvious to the expert and they don't recognize it. An inherent value in coming together for two, three, five minutes, is the ability to kind of think out loud together. So, I'm an anesthesiologist. If I'm standing in a recovery room, and somebody's concerned about somebody's breathing, it's very easy to say, "Look, they're not retracting, they're

speaking in full sentences, they're well saturated, they're breathing 22 times a minute. These are the things that tell me they're doing well, any of those things change, call me."

So, what we do is we create predictability. One of the things that's really, really a basic concept of high reliability is anything you can make predictable, make it predictable, so that the experts can manage what's unpredictable. What we want to do is remove avoidable surprises. This is where we find, kind of, this logic, this model, this way to kind of think about cultural maturity, as something that is actually quite valuable.

The other experience we had, years ago, as we kind of started socializing this cultural maturity model is, you could take a slide like this into a room of caregivers, or managers, physicians, and have that conversation, and say, "In our unit, in our hospital, where do you think we are today?" It's pretty amazing how people lock into it, which then kind of grounds you and says, here's where today, let's think about where we want to be, let's talk about the short list of explicit actions we can take to help kind of move us, right, move the ball down the field. Next slide, if you would, Chris? We've got a little bit of a delay here.

The title says: Avoidable Patient Harm. Is that what you're seeing?

No, it hasn't moved on my screen. I think we have a Lazy PowerPoint. Every time we give it a pause, it goes to sleep.

Others are seeing this, so if you want to speak to it?

Okay. Yeah, let me just do ... Give me just one second, while I do that. One of the things we know is, despite the most skilled, well-intentioned, caregivers in the universe, the rate of avoidable harm, today, is really just not acceptable. We know, from surveillance, and trigger work, that's been very systematic. The work of the Stan Pestotnik, the work of Don Kennelly, Baylor, Lee Adler at Adventist, et cetera. Our friends, Allan Frankel, and others at IHI.

But fundamentally, one in three patients admitted to an American hospital has something happen to them we wouldn't want to happen to us. that's the ability to kind of get off into trouble. When we look at patients who experience serious harm, there are error chains. It's almost never one thing that goes wrong. It's a series of 10, 15, 20 things, that are linked together, is that error chain, as that snowball starts to roll down the hill and create the avalanche.

That's a lot of opportunities to go the wrong direction. We do know, and they're roughly one in 10 people admitted to our hospitals are injured or harm to the point that they stay in the hospital longer and go home with a temporary or permanent disability. That's not minor stuff. That's kind of getting hit by the pickup truck.

We also know, from some very good work that our friends Don Kennelly and Lee Adler did with the Office Inspector General from HHS, that roughly two thirds of those events are either avoidable or ameliorable. What that means is if you detect it early and you act on it, you basically put out the brush fire instead of the forest fire. Again, you always want to have a plan, because if you don't know where you're trying to go, then you're much more likely to not detect when you're going in the wrong direction.

Then, we get into failures of recognition to get us to the edge of the cliff. Then, we get into the issue of are we going to effectively rescue that patient? There is very fundamental opportunity. When we started the rapid response work some 15 years ago, what did the literature tell us? 70% of patients who experience cardio respiratory collapse in American hospitals had documented evidence for an average of 16 hours in their chart before they fell off the cliff.

The ability to know where you're going, know if you're going the right direction, wrong direction, and detect clearly that this doesn't seem to be quite right, or this isn't exactly what we bargained for, and to intervene, is absolutely critically important for the delivery of safe care. Next if you would, Chris. Let's talk about the role of senior leadership. Senior leadership is absolutely critical. When we think about and share the experience of wandering around, learning in these Massachusetts hospitals, four years ago, what was the quality of all four of those hospitals that we said were either proactive or generative?

Senior leadership was physically present, every day, walking the hallways, two to three hours. You would talk to people in the hallway and they would say, "Frank's the CEO. I see him in the hallway, every day. He knows about my kids. I know about his kids. We're on a first name basis. I would never hesitate to go to him." You would say, "If you talk about an issue, or a problem, or a defect, you don't have it, it doesn't work, you can't find it, and you go have that conversation, what is your degree of confidence that it's going to get fixed?" They say, "I'm extremely confident."

That whole concept of dialogue, interaction with leadership, in a way that leads to visible improvement and feedback is the hallmark of very high performing organizations. Just think as you look at the side. What dynamic do you guys exist in? We've been in places where you can talk to front end caregivers. We never see them.

Again, reactive. Something bad happens, all of us show up. Where you want to be is up in proactive and generative, where there's systemic engagement. It's not transactional. It's building relationships. It's dialogue. There's continual learning and feedback.

That's critical for habitual excellence. We certainly have seen that a number of places. Then, you get into this conversation of, "Oh well, we're too busy. I don't have time to do that." You're too busy not to do that, right? It's critical to be able to align senior leadership-

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So it's critical to be able to align senior leadership, middle management with the people at the bedside because if you don't do that, often the people in senior leadership positions, they're kind of not solving the right problems. Right? I mean think about Toyota production. The hallmark of the Toyota production system is frontline interaction with managers and leaders. You raise your hand on the production line and somebody there in five or 10 seconds. So this is continual cycle of learning and feedback. Uh, next, if you would please.

I've advanced.

Thank you. So, so here we're looking at some culture data. One of the things we do a lot of is measuring culture, and we're looking at some data from our score survey that we developed with our friends at Duke. And we're looking at a very large hospital. So this is about an 800 bed hospital. And every line on

this is a unit within a hospital. And we're asking a very simple question. So, green is positive, five point Likert scale. For five; neutral, a three; not so sure; and negative, no. The values of facility leadership, the values of our senior leaders are the same values of people at the front lines.

So we have alignment within the organization. What we see here is something we see all the time, which is there's tremendous variation within the same building, because we know culture lives at a unit level. But we can also see within the walls of that building there's some very functional units where they're 80, 90, 100% positive. And then toward the bottom of this, we can see some units where that's less than a coin toss. And so, really understanding that dynamic, that interaction, is there a systematic process or is there not a systematic process, is really critical for success.

We also think: what are the explicit actions that could be taken to move this forward? And when we look at this data, and we feed it back to the unit on an organizational level, one of the real takeaways on this is look at the yellow because those ... You have the people that are positive, and you can build on whatever you're doing right with them. The people in yellow are neutral, and that's the low hanging fruit. It's much easier to convert somebody who's neutral into the positive category than it is to move somebody who's negative to doing that. Next, if you would. So I'm assuming you moved ahead. I seem to have a little bit of a lag here.

Yes I have.

Yeah. So, so let me show you a kind of the science behind this. I'm going to show you a study that we published a year ago of cultural data. This was 17,000 people across 30 hospitals in the state of Michigan. We've had the privilege of doing a lot of work with our friends in MHA over the years. And, and so, what you're looking at when you're looking at these kind of collections of three bars is we're looking at specific areas of the survey, or domains. Learning environment, the ability to identify and fix things, the quality of local leadership, teamwork, safety, burnout, also look to personal burnout because we're very interested in that as a research issue, and then also qualities of work-life balance. So because we survey electronically, we asked two questions at the beginning of the survey: "Do your leaders participate in walk-arounds in your organization?" 10,000 people said yes. And then the second question was, "Did you get feedback on the issues you raised?" And 4,500 said yes and 5,500 said no.

So, if you look at this and you think across the mean, which is the blue, the people that said, "I got feedback when I raised my hand. Somebody listened, somebody cared, somebody did something and I got an answer back" are dramatically stronger scores.

Keep in mind, you literally need about a five- to seven-point difference to be statistically significant. The difference between getting feedback and not getting feedback and qualities around learning environment, trust that when we identify things they'll actually get addressed and fixed, are over 30 points. The other take home message from this is don't ask people what they think if you're not going to come back and talk to them because we can see that the people who did not get feedback went backwards. Next slide if you will.

So, if we think about qualities of local leadership, you really want to be up into proactive or generative. It cannot be down in reactive where if I'm working with the right person, it works. Leaders have to model effective values of effective leadership. They have to build trust. They have to listen. They have to provide feedback. Um, next, if you would, Chris.

So, here we're looking at some cultural data. And one of the things we know, because we just looked at that study, is the ability to consistently get feedback is key. And the reality is we can see within the same hospital, some units do that extremely well. Some units do not do that well at all. That's absolutely critical. Next, if you would.

So, one of our learnings, and this came from working in very large organizations with our friends like Mayo and NYU and others, is that when we looked at the skill of the middle managers, the people that we had actually tasked with very difficult jobs, and we looked into distribution a bell curve, 1 in 10 of those people were exceptional. And 1 in 10 of those people shouldn't have been in the job. About 8 out of 10 in the middle were extremely well-intentioned people who wanted to do the right thing, and we had not provided the skills for them to do that. And that's really a critically important piece that should be part of the work we do. Next slide if you will.

So we're going to spend a couple minutes on psychological safety. Psychological safety is the comfort level to speak up and voice a concern. There's a whole spectrum from, "I don't speak up, I keep my head down, and I stay out of trouble," to, "I speak up if I'm working with the right person." Think about where the real disasters occur. They occur when we're working with the wrong people. You need to be in an environment where A, you know the plan, you feel comfortable speaking up, you know you're going to be treated with respect. The overwhelming majority of terrible, adverse events that occur in our hospitals, when you go back and dissect them, somebody knew something wasn't right, didn't feel right, and didn't feel comfortable to speak in a way that was effective of getting somebody to the bedside. So let's move ahead and I'm gonna let Chris ask you about your experience.

Thanks Dr. Leonard. We're going to initiate the second poll. That question is: do you know if a patient who has experienced serious, avoidable harm because someone was hesitant to speak up? Please take a moment and answer this question. Again, we've got the slides in the handouts pane, and you can ask your questions in the questions pane which we'll address at the end of this presentation today. Very good. Thank you for those quick thoughts. We'll close the poll and share results, and the results are this: 74% said yes. 26% said no. Dr Leonard.

Yeah. And I greatly appreciate your honesty and candor because that's reality. And I've been in audiences where asked that question and we did it through anonymous polling and it was 100% of the people in the room said that was the case, and two thirds of the people in the room said, that was me.

So, so let's talk about why this is critically important, and what we need to do here. Next, if you would.

So, one of the things we measure, when we measure culture, is psychological safety. And again, here we're looking at a very large hospital. We can see some units were 100% of people say, "I would speak up if I was concerned about a patient." We can see some places where that's less than 50%, and I can tell you in the HRO work we did in Kaiser, we measured culture across the whole organization and then we mapped it to, what does it look like in high risk areas like obstetrics and surgery and critical care and the emergency department, et cetera because when you have low degrees of psychological safety in high risk environments, bad things happen. Next slide if you would, please.

So here we're looking at some culture data. Every pair of these bars is about a 300 bed hospital within the same care system. The light purple are the perceptions of safety of nurses in an operating room. The maroon are the surgeons. And if you look at the left-hand side of this, this is the dynamic you do not

want, which is skilled people doing the same work in a high-risk environment having profoundly different perceptions of what that feels like. And the circle with all those little numbers, those are the never events. So those are the surgical never events that occurred in those hospitals and all but one of them occurred in low-safety culture environments. In fact, we see time and time again that the higher frequency of adverse events in low cultural areas. Next slide if you would, Chris.

So again, if we look within an organization and we're looking at units within the same building, we can look for perceptions of teamwork and we can find that ranges from 22 percent positive to 92 percent positive within the same place. And there's a tipping point at 60%, when you get to 6 out of 10 people saying it's good here.

So just think about we've aggregated the data below and above 60 percent. Each caps are dramatically different. Medication errors are far more frequent in the low culture areas as well as pressure ulcers, turnover, employee disengagement. And ultimately when you talk to these nurses, what they say to you in the low units is, "I'm here by myself. I'm just trying to get through the day. I'm here by myself. Somebody else will do the dressing change; somebody turned the patient," et cetera. And that's not the dynamic within the green: "I'm here with my friends. We work hard to do the right stuff." Next if you would, please.

So here we're looking at what's called a radar diagram, and this is a hospital with 1,000 people. So it's 0% positive in the middle, 100% positive on the outside. And if you look at 2:00, we've got 30% of the people in this hospital hesitant to speak up. We have half the people at 7:00 saying, "I deal with difficult individuals on a daily basis," and look at the degree of communication failures at 8:00 and 10:00. More than half the people say we lose critical information on a consistent basis. So let me hand it to Allan there, and I apologize I'm running a little tardy on my end, but I'll leave it to you to finish this up here.

No problem at all. Um, so for the next slide, Chris, and we just summarize some of Mike's comments. What has he referenced? There are certain behaviors by senior and local leadership that you have to have foundationally, this thing we call psychological safety. And that you also have to have foundationally certain kinds of team behaviors in order to achieve the kind of safe and reliable operational excellence that we are interested in in 2018. Let me just add one other picture to that so far and talk about resilience. Next slide. Chris please.

We know obviously in 2018 that burnout has become this major factor. The measurements and most of the culture surveys are actually measuring gradations of burnout that start off as emotional exhaustion and frustration. In this particular question, people in this work setting are burned out from their work. The red is bad, green is good, what you're looking at are essentially hundreds of work settings and departments in this particular view.

So those work settings at the top that had 80 and 90% of people responding negatively. In other words, they do feel emotionally exhausted, frustrated, or burnt out, are going to be work settings or units where the fertilizer in the ground for improvement has basically been leeched out of the soil because of the way people feel. The healthiest units are going to be down on the bottom with a rate of frustration and exhaustion and burnout that are going to be in the 10, 15, 20%. In other words, 2 out of 10, 3 out of 10. And then you still have at least some foundation for improvement activity.

So the goal is to get down to a 20%, 25% level of folks being frustrated. Obviously you'd like to see even better than that. But what you'll also notice is that how benchmarks at the top, 27, 43 and 60th, those talk about the 25th percentile, the 50th percentile, and the 75th percentile of the many hundreds of hospitals that we survey. So it's pretty clear that levels of burnout by physicians, nurses, and others is extremely high in health care and needs to be addressed. Now, next slide, Chris.

So what are the factors that influence burnout and its opposite, resilience? In the generative organizations, both outside of healthcare and in, well, what we see first and foremost, is that people say, "I have a voice"; in other words, "When I speak up, it influences my environment. I am valued by the organization." Mike gave the example of Frank, who was actually Frank Summer, in one of the hospitals out in Massachusetts who knew his personnel so well. Small hospital, he could get around, but you can do it in bigger institutions too. That you feel supported in the work you do, especially by the people around you, and that you have the tools and resources to do your job.

And these come directly from Paul O'Neill and the work at Alcoa, the really stellar kind of culture that was created in Google, even with its current dissatisfactions we've seen in the last couple of weeks. I mean, organizations that have been highly successful begin to look pretty similar in what people say about the experience of working within their organization, and these are the ones. "I feel valued. I can influence my environment. I feel supported in the work I do, especially by those others around me on my team, and I have the tools and resources to do my job." So then the question is, how do you get here? Next slide, Chris.

So Mike and I have been in the business for a quarter of a century of running interventions, sometimes with the IHI, for many years now with our own group, Safe and Reliable Care. One of our suddenly significant interventions started at Mayo Clinic, who's done outstandingly good work, and went bunker to bunker, in other words, work setting to work setting: the radiology department, to the emergency room, to the billing office, both clinical and nonclinical units, where they were leveraging how local leadership and local management and power workers give them voice, make them feel as if they're cared about and that the people around them care about them, and then layering on that the improvement process.

Just to give you some sense of the kinds of things you can begin to see in units like this: you can look at one senior surgeon who said to me a year and a half into the effort. He said, "Before we started this program, my biggest concern when I went home in the evening was that I didn't know what I didn't know. In other words, nurses weren't comfortable coming and talking to me about the issues they were running into with the patients on the unit. Now that nurses and staff are comfortable about speaking up about their concerns, I know what I need to know to help the services run smoothly and safely. I go home in the evening with great assurance that we are on track."

This idea of people speaking to each other and the comfort level of achieving that in a prescribed manner turns out to be an essential piece of creating the operational excellence that we're talking about. And indeed, you can see significant improvements across as the Mayo system on the right-hand side. Next slide.

So the question is: how do you go about achieving this? So we've got the framework on the right hand side. If you were to boil it down, it's got three components: culture, leadership, and a learning system. Leadership is the key component. If you don't have diad or triad leadership at a local level, and if you don't have governance of this method at a senior level, the likelihood of holistic change in organizations

dramatically drops. If you do, those two groups have to create a culture and where psychological safety is manifest, where people feel that they'll be held to account fairly, and where the team behaviors, the briefings and the debriefings are robust regardless of whether you're talking about home care or the operating room. That foundation then allows you to build the improvement process that you see below in gray. And Chris, you were perfect and changing to the next slide.

Because if you were to boil down what that improvement activity looks like and the culture, it boils down to the one phrase that you want to walk into units and see that they are self-reflecting and improvement-capable. The culture needs to be robust enough so that they do self-reflect, and the improvement capacity has to be robust enough that they can look at the defects, clinical or cultural, and act on them using the appropriate methodologies, lean or the model for improvement and so forth. Next slide.

As Michael said, you don't get to pick which of these component parts in this framework on the right are healthy. If any of them is not healthy, just like a patient, then digging an organ in a patient, that patient may compensate but will not be as healthy if they've got pulmonary fibrosis or kidney failure or scoliosis or rheumatoid arthritis and so forth. So you want healthy organs around the entire puzzle piece. You don't get to pick and choose or ignore one or two if they're not. Next slide.

Conceptually, the way to think about this framework, and we can move to the next slide again, please, Chris, is that every one of your work settings in your organizations, within the acute system, but also heading out into the community and the community of care, is made up of groups of people who come together every day who define them. The way they define themselves is, "I work in the physician's office, the surgeon's office, the booking office, the medical clinic, the operating room," and so forth. Each one of those named areas is a group of people working together that either is or is not self-reflecting and improvement-capable.

Our interest in 2018, or the reason why Mike and I are on this call today is, we have thought for a quarter of a century about what does it take to get a series of work settings to be self-reflecting and improvement-capable, and to drive the kinds of changes that we have been seeking for 25 years, or since the early nineties? We started looking at how error-prone healthcare was found to be. The answer is: you need internally, within each of these work settings, that self-reflecting, improvement-capable environment, and then the series of work settings that link to each other. In the surgical environment it would be the surgeon's office and then the booking office and pretest and preop and postop and the surgical floor and then rehab. If each of those is capable, then you are in a position, if you are running a steering process across the surgical service line, to get them to work at the interface issues and then create a surgical service line that is self-reflecting improvement-capable. Now we're beginning to run the system the way it should. And obviously, you know, same thing if it's oncology, or pediatrics, or maternity, or medicine. Next slide please.

So, we've been at this for a quarter century. Let me just tell you some of the caveats in 2018. First of all, if you want to do this across an organization, the senior leadership has to be aligned in its interest. We go into organizations all the time where the chief nursing officer is interested in magnet. I was just in an organization where their operational excellence group reported to the finance department, and then the clinical leadership, the chief medical officer, and the quality safety risk folks were all interested in "high reliability" work. Well, if you've got nothing looking at magnet; your quality, safety, risk looking at high reliability; and departments being finance-driven, you're pretty much in a situation where you're guaranteed to have those bumping into each other and not aligned. So the first piece in organizations is

that at a board governance steering level, the senior management has to agree that they are working on work-setting development to become self-reflecting and improvement-capable, and that it's going to be done in an integrated fashion.

So the senior leadership agrees to integrate the work. High reliability and magnet can be linked so you draw physicians into the nursing magnet process the way it should be. The [OpEx 00:48:37] means process improvement and operational excellence and systems engineering and human resources folks become aligned with the high reliability and the magnet effort, or nursing effort, education as the case may be, and then you weave all of those together at the senior level to say, here's the direction we want to go in.

The next piece after that is that you look at the diad and the triad leaders that you have in your work settings. Again, I'm an anesthesiologist, so you take the operating room. The chief of surgery, and the surgical director, the chair of anesthesia, the perioperative nurse director plus her managers of preop, postop, and inter-op. That group of people, you have to look at them and say, "Do they have the skillset to be self-reflecting and improvement-capable? And have we given them the time to focus on that?" Or are they spending the bulk of their time thinking about either payroll schedule in an academic unit, academic advancement, because if those are the areas that they're spending the bulk of their time on, the capacity for high reliability is basically nil. And you have to then ensure that the finance office, the academic dean, is not taking up so much of those individuals' times that material and systems management isn't making it so hard that ...

PART 2 OF 3 ENDS [00:50:04]

Material and systems management isn't making it so hard that the managers are always looking for equipment. All of those units, the resource personnel in billing and finance and supply management, they have to be capable in order to give your managers, your clinical managers, the time to focus on self reflecting improvement capacity. So the senior leadership doing what they should do, and the middle management effective in running learning systems, you are configured to move your organization forward.

But these are conceptually agreements that have to occur at the senior level. They have to be expectation sets of the middle management, which includes obviously all the physician chairs and chiefs and so forth. And then with that in place, you then start the interventions of saying, well what is your skillset in leading? What's your skillset in team behaviors? What's your skillset in improvement ability? And then you support those managers with the appropriate training to lead well, to create voice, to run briefings and debriefing robustly in ways that are perceived as useful. And then in the defects that are found to apply improvement skills. And if you don't have those at the management level, you'd have to be able to go out to your process improvement folks to say, how do I create this control chart, or run chart? What's the best way to show this data? How do I create an aim statement or run a plan to study act cycle?

Mike and I have been at this for a quarter century. It is hard work because it required alignment at many levels. And the willingness to then train the middle management in the concepts that Mike has articulated and that I've just described. Our sense is, that making visible the activity at the unit level in such a way that senior leadership can also see the activity, is one of the component pieces that is required in organizations in order for this to work effectively.

We have pictures of thousands upon thousands of physical white boards that are inadequate to the task of making culture and improvement visible. And are inadequate to the task of collecting the kinds of cultural and operational data that should inform senior leadership about where to apply resources and what activity to take. We've been using what we call, digital learning boards. And just to give you some sense of what they look like, to give you some sense of what's required in 2018 to move organizations, we'll run through a couple of examples very quickly.

Chris, run through. So why realtime learning boards? You want people putting in issues comfortably that have to do about culture and communication. I did or didn't know the game plan for my patients today. About operations. We have blood pressure cups that don't work. About clinical activity. We have five obstetricians giving Pitocin five different ways. Didn't make any sense and I almost made a mistake because I had to do two types of calculations for two different obstetricians. You wanna be able to put those in as issues, into your learning boards. You wanna be able to see the PDSA cycles you're running. You wanna make this actually seem as if it is fun because it's their voice, the voice of the frontline having an influence on their environment. Which then makes the collaborative effort worth doing, which will indeed decrease burnout. And will indeed improve your improvement activity.

It then makes workflow intuitive because people get to see it and look at it, whether they're on the unit or elsewhere. Our learning boards allow people to join by video. And underneath the learning boards there's an analytics suite which allows us to measure degrees of engagement, kinds of issues coming in and so forth. Our next slide.

So what are these things begin to look like? Just like the white boards in the bottom right, you see the little sticky that people would put notes on. So these are notes that go onto the learning board. Anesthesia questionnaire not easily accessible, ran out of sponges, inadequate restocking. Didn't know the game plan. Anesthesiologist on call didn't know X, Y, or Z. And you can move these things from new, to in progress, to completed. You can track them, label them and so forth. Next slide.

You wanna be able to see your run charts and your control charts, and you wanna be able to link the issues that come in on a daily basis to the groups that are working on the activity. In this case, decreasing decision to incision time for urgent C-sections. But I wanna know what happened yesterday, that made it difficult to do the C-section, so can I take the issues that come in, send them over to the improvement group for them to look at, at the end of the week in a way that's meaningful and that gives people voice? Next slide.

This is an example of an organization over a period of a year. What you're looking at in the graph is a number of issues that were put in across a whole series of units using these boards. So we can track the activity of the boards. In the top left you see 59%, we can tell out of 645 BTUs as within these various units, that 60% of them are engaging with putting in issues, being responsible for issues, participating in surveys, and we can identify the issues by label on the bottom right in such a way that we can inform senior leadership of where they should allocate resources. Next slide.

You wanna make these things accessible through all the various varieties of technical hardware that's available. So it's easy to input data and to look at these screens. Next slide.

And then use this information when you run your huddles, so that huddles become informed appropriately by the kind of real time activity that issues generate. And allow you to see the appropriate

run control charts, progress, and so forth as part of your improvement activity that is also then highlighted as part of your briefings and huddles. Next slide.

And this just points out what time to have huddles and so forth, so you need to obviously have these team behaviors robust within your units. Next slide.

And messaging in order for the appropriate communication from senior leadership to frontline and back. Next slide.

We know that putting these kinds of mechanisms in place can improve management to create the kind of self reflecting improvement capable environment. Environments that we're talking about I would strongly advise those of you listening to be thinking about how to create these kinds of things within your organizations. Our sense is that in order to move our complex environments, especially as they move outside of acute care into community settings, and you're dealing with population health with the units that are all the way from the ICU out to home care, that we're going to need an integrated way of understanding issues across the panoply of care. And technology's gonna have to help us in that regard. Next slide.

So let me stop there. Short of a little bit of time, but happy to take questions or comments from the group.

Thank you Dr. Frankel and Dr. Leonard. Great material today. Wonderful models. Great research. I think the audience will appreciate having those available to them. Both as a handout in the pdf form. We will followup here after the webinar with a slide deck. And for the audience's sake, we have lots of good questions. We are gonna go a little over. Before we jump to the Q&A though, let me go ahead and present one last poll.

Let me get that queued up. And then I'll explain why we're doing this. While today's webinar is focused on education, many of you are interested in followup from Health Catalyst about any products or services that we do offer. If you fall into that camp, please answer this question. We'll leave this up for a few minutes while we begin with our Q&A.

So Dr. Leonard and Dr. Frankel, great questions here. Let me start with one that seems like the easiest to ask. Nurses, physicians, clinical teams are very busy with lots of work, what's one thing they could do today, tomorrow, this week, to help them make progress? [inaudible 00:59:09] talked about.

Allan, I'm happy to answer Ryan. Fine I'll let you do that.

Yeah, I apologize, Mike. I lost [inaudible 00:59:21] for a sec. Would you just repeat the question, Chris.

You bet. And it sounds like we have a little echo. We might have two audio sources Dr. Frankel. So Dr. Leonard, if you could take this until Dr. Frankel's audio is good. [crosstalk 00:59:35].

Yeah, I mean, that's a great question and it's real. Which is, we're busy busy busy. And the question is, can we create a few minutes every day to get together and think ahead? And can we build an environment? Because all day long you come in and you work around, pebbles in your shoes and defects and problems, can't find it, doesn't work, didn't know it. And so it's creating the space to say, can we get

together and plan forward? Can we take one minute at the end of the day, at the end of the procedure, to ask three questions? What did we do well? What did we learn? What got in the way? That need to be fixed.

And then create a process that we can take the things that get in the way, big and small, to somebody and have a reliable process to say, here's what's getting in the way, can you help us? Can we fix it? And that's the learning system. And you can start small, but it's the little things that nobody seems to be able to get fixed, that drive everybody crazy and deliver this very strong symbolic message of nobody cares. This will never change.

So you can do some very simple things, low tech, five or ten minutes a day. And one could argue that if you're huddling effectively, briefing, thinking ahead, your ability to do that work is gonna be far more effective.

Thanks for that answer Dr. Leonard. Next question from Manuela, who made several good comments around this child's fairytale related to the Emperor's New Clothes. Lots of adults in the room, oftentimes the adults aren't willing to acknowledge that the Emperor's New Clothes really aren't clothing, but he's naked. Who is it in this industry that's there to point out to the Emperor that he's naked within the patient safety realm?

Well I guess I have to do my best guess as to the Emperors. But I think that, let me give you my read, and then Manuela maybe can tell me if I'm correct here. So many organizations today are focused on growth and market share and brand. And I understand that, you have to be financially stable, you want people to know you're good at what you do. But the reality is, it all comes back to the patient. And if we're unable to deliver safe care and we make decisions that inhibit that, or aren't aware of it, there needs to be a way to speak truth to power, so we can do the right thing.

And certainly what we've described to you, and that focus on harm, and there is traction around harm because there's a lot of money involved in that today. That's a way to really ask the question, at least the question I think you've raised that says, it's not about who's right or who's wrong, but we all agree every patient should get optimal care every day, and there should be no avoidable harm. So let's focus there and let's continue to kind of move the ball down the field.

And I think that's the conversation you wanna have. And if I completely missed the boat on that, Manuela, please tell me. [crosstalk 01:02:44] capable of doing that.

Well thank you Dr. Leonard, I think that's a thoughtful answer. Just a quick clarification, Manuela was speaking about those who can't speak in English, to refer to the clinical staff what their concerns might be. But I think you answered it well. There are a couple more questions. Next question, can you explain or unpack self reflecting? Dr. Frankel you spoke specifically about that, if you're available?

Oh sure. Yeah. Can you hear me again, Chris?

[inaudible 01:03:10].

Okay. Yes, let me be very specific about it. You take a group of people, whether it's the surgical team at the end of an operation, or the general practitioner with his medical assistant and the front desk folks,

and the booking folks as the case may be in an office practice. And they get to the end of the day, and in some way or another they come together. And I realize there's challenges in doing that, so debriefing is a process not an event. So at the end of the operation it's easy, we'll all stand there. So let me just take that example, what does self reflecting mean?

Self reflecting means to say, how did we do in this activity that we all participated in? And, when we look at and think about how we did, let's think about it both clinically, operationally, and culturally. So it's not just that we did the operation, the operation went smoothly, it's also, did we communicate effectively? Was everyone comfortable speaking up during the operation if they had a concern? Did we have the equipment that we needed? And, do we think that the operation went well, was the right operation as the case may be, given what we actually saw on the patient?

So the conversation reflecting back, in other words, thinking about what just happened is a conversation that has to look at clinical, cultural, and operational issues. So the nurse and the MA and the physician in the office practice would say, how did we do in seeing the patients today? Was our communication clear in terms of where everyone had to go? Did we re-brief when we needed to, when things got incredibly busy? I could go on and on and on with many examples in different work settings.

But that's what self reflection is. Self reflection is looking at what you did with the group of people and saying, how did we do? Did we do it okay? Not just around the operational stuff, but the clinical and the cultural stuff too.

Thank you Dr. Frankel. Next question, we've got a couple more. I'm working in a very heavily unionized environment for the first time after over 15 years of doing this work in non-union environments, can you talk about observations and recommendations you can make when doing this work in such an environment? This comes from Carrie Eden, thank you Carrie.

Sure, so let me give you a couple thoughts. And I wanna just give a quick answer to Manuela, which is, everybody needs to have a voice. And often we find the most profound insights are from unit secretaries and housekeepers and other people. So the key is, you gotta get everybody into the conversation because everybody is smart and everybody has this ability. And if you're not, that's a problem.

So I spent 20 years in Kaiser, Kaiser is heavily unionized. There's some places where unions work very effectively. There's somewhere, places where that's a reasonably adversarial [inaudible 01:06:14]. The one place we got very clear traction, this was [inaudible 01:06:19] and others work and Kaiser. Was when we linked workplace safety to patient safety. And as long as we're coming to the table and saying, let's play a game everybody wins. Better care for patients. Better work environment for our folks who have what they need. Know the plan, feel psychologically safe, feel like they're not at risk. That's the sweet spot in a union environment. And there's a whole spectrum of dynamics from highly collaborative, to very adversarial.

But it's really finding that common interest. And then building trust and relationships to move it forward. And it's done very effectively in some places.

Thank you for that thoughtful answer. We've got a couple questions around this last topic, which we'll make our last question today. Related to psychological safety, can you dig a little deeper and un-package

some of the thoughts around balancing psychological safety with professional tact, or practices to interact positively with others?

I'm happy to take that. Yeah, it's an interesting conversation. Psychological safety says, if you tease out Amy Edmonson's definition of it. I can ask questions, I can answer feedback, I can be respectfully and appropriately critical, and I can suggest innovative ideas. The overlap with professionalism is, professionalism fundamentally is a relationship of respect or an environment of respect regardless of position, hierarchy and so forth.

And the challenge that I see much of the time is that people think, alright psychological safety means I can speak up. Well then when I speak up, I'm told that I shouldn't have spoken up in that kind of way, or that when I spoke up it was inappropriate. And I think the answer is, our expectation of you, psychological safety, and especially the third piece which is respectful criticism. Is that when I speak up I am doing so in service of advancing the teamwork for the best possible patient care. And speaking up in ways that undermine the relationship between the team that generate rancor between members is not helpful.

So this issue of psychological safety is, yes, you speak up, but you speak up in service of a self reflecting, improvement capable environment. And if respect isn't part of that, and if you're not part of pulling the oars in the same direction with the team and furtherance of reliable care, then you're not doing your job.

So the job of managers is a tricky one a lot of the time. 'Cause you're gonna have people that have strong opinions, they may have different opinions that others in the group. And the expectation of managers, of leaders, is that when people express those differences they do so in a way that's constructive, not destructive. So this relationship between professionalism and psychological behavior on the one hand is simple, but on the other it requires skilled managers to manage well.

Thank you Dr. Frankel. We have one last question that we wanna slip in here, I think for the benefit of the audience. It's related to patients. We've talked a lot about staff and creating a culture for them to be able to raise issues, what about patients? How do you engage a patient so that they can feel comfortable raising their own concerns, or feeling confident in the practice of care given to them?

It's a great question. Allan you wanna take it? Or you want me to take it?

No, no go ahead, Mike. We're gonna say the same thing would be my guess.

Yeah, probably. So one is, how do we include the patient and their family in the conversation? And one of the things that was done in Kaiser some years ago was nurse knowledge exchange, which is handoffs at the bedside with the patient and their family. And there was a concern of oh, this will go on forever. And you can frame it and you say, this is gonna be a five minute conversation. We're gonna do a teach back at the end. You heard us talk about it, please tell me how you explain what we talked about to your family?

So one is how to include them in the conversation in a way that makes sense to them. How do we get them in the room, right? So that we're learning and advising them, so we're having the right conversation in that. We have certainly see learning boards, digital and analog in units where patients

and their families could enter information. And certainly places like oncology. And that's where people have long lengths of stay. I mean you could see people reading the boards and entering things, and getting feedback.

I think it's absolutely critical, the voice of the patient, doing white boards in a room. Here are the three things you can expect to happen in the next eight hours. Are we rounding and kind of speaking plain English? And really learning whether you understood what we talked about and how are we engaging them to advise us on the way we deliver care, I think is huge. So lots of opportunity in that regard, but you can see health systems that do this really nicely. But it's key. 'Cause if we don't do that, we don't get it right.

Thank you Dr. Leonard. Dr. Frankel any last thought? Otherwise, we'll go ahead and wrap.

No, I think Mike was good.

Wonderful. Well from all of us, to you two, thank you for your dedication to this important area. This webinar is now concluded.