Quality and Safety Series, Season 1, Episode 7: Developing Reliable Processes

The speaker is Christine Bailey, Quality Improvement Organization Executive Director, HSAG.

Speaker 1 (00:02):

Hello everyone. So, our objectives are to define process reliability, discuss the importance of process reliability, and identify the four steps in developing a reliable process. So, there's a couple terms we want to talk about: reliability and capability. And both are equally important when we're developing a process. So, for example, you know, you have a current state process, so that's what we're doing now, and your future state, which is the changes we're going to make to lead to improvements, and it has to be reliable and capable. So, process reliability is the consistency of a process to produce a specific outcome. So, we don't want a process that one time yields, you know, 98% and the next time 20%. I mean, we want to make sure that our processes are reliable. And then capability is the ability of a process to produce a specific outcome.

Speaker 1 (01:12):

Now, usually the gold standard, we are looking for processes to be at or above 95% reliability and capability. So, what is a reliable process? It's a deliberate design, what we're going to call standard operating procedure. So, how we do something, the process steps, and make it uniform. This makes it consistent. It'll improve our outcomes, it'll reduce deficits and have a positive outcome. So, what is a process failure? And, a lot of you know, the number one enemy of quality improvement is variation. So, when we have a good process, it takes out the variation. One of the enemies of a process failure is autonomy. People doing their own thing. And there's some accountability built into that. And it's also why we have to do some audits along our process to have a control plan, just to make sure that we're adhering to that process, and that people aren't doing their own thing.

Speaker 1 (02:24):

So, again, we always say something has to be process-dependent, not person-dependent. And I can remember working with the hospital, really working hard to drive down their HAI and they did an awesome job. Just really huge improvements and all of a sudden everything fell apart and we started seeing improvements at a sister hospital. And what we found out was the infection preventionist at hospital A went to hospital B and everything fell apart. And that's because the processes were person-dependent. So, there's a lot of pitfalls with that. Putting too much detail in your policy, for those of you that are designing policies, you want to keep it high-level and it's really hard for every person in your facility to know every detail of a policy. So again, your policies are that foundation, that overarching structure and your processes come below it.

Speaker 1 (03:34):

So, you can't count on your policies to drive outcomes. And education. So, education is important, but so many times when we're working on an improvement project that requires some process changes, instead of changing the process, we're going to educate people. That is not a primary intervention. There's, you know, a saying, your processes are designed to yield the outcomes that they yield. So, you know, you can't do the same thing over and over again and educate people and expect changes. Very important. This is not for highly-reliable processes. These are not for processes that require a hundred percent accuracy that could yield a catastrophic event. So, this is not surgery, blood transfusion, sponge and instrument counts. You know, those are a hundred percent no-questions-asked. These are for other processes. So IHI developed a really great process, if you will, for developing a reliable process.

Speaker 1 (04:51):

And I really like this because it simplifies it and makes it more understandable. So, let's go through and kind of unpack each of the pieces. So, it's segmentation, visualization, standardization, and redundancy. So, segmentation: focus on a smaller representative group until a process is refined. It's like taking something from a test environment and putting it into production. There's a lot of variables that will impact your processes. A lot of things that are beyond our control. So, as a result, you really don't know for sure how your process is going to perform until you go out there and test it. So, use a small group, whether it's a single unit, department, clinic. Pick a unit or an area where you have engaged frontline staff. You want to look for those innovative teams and strong leadership. It must be large enough to compile enough data.

Speaker 1 (05:56):

You know, you want to make sure you are picking a unit or an area that sees enough of that procedure, enough of that diagnosis, so that we can compile enough data, but small enough to manage. And then, you scale and spread later. So, visualization: this is your process mapping. A process map is a visual representation of a series of steps or activities to achieve a particular result, provide a service or create a project. There are very complex processes, but there's also a simplified process. So, it's just taking a higher look, a higher look at the key steps to a process is that simplified process. And then, the complex process is where you get very, very down into detail. And a lot of times those process steps, those simplified process steps have multiple process steps underneath them. And again, you know, you can have that basic process with three to five high-level steps. Start there.

Speaker 1 (07:08):

And then, the other thing is you need to create that graphic representation of the current state. And that will help you identify defects or errors in the process. A policy does not improve a thing; it should drive your process. So, redundancy. Again, you know, we talk about really to have that reliable process, it needs to yield a 95 or better outcome. So, what happens if we only hit 85? Does that mean we totally abandon it? No, we have the opportunity for redundancy and a lot of times we put redundancy in things as double checks. You know, those one hundred percent critical catastrophic processes. You know, a lot of times we will have redundancy of multiple people checking things because it's so critical. Kind of the same thing here. If you're only yielding 85%, but we know it's a good process, what can we do to hit that 95%? Build in redundancy.

Speaker 1 (08:15):

So, think of it as your backup plan. Redundancy is an integrated process to improve the overall outcome and increase reliability. So, here's an example. Our sample has a hundred patients, 80 of them the process worked with. So, we have 80% reliability. We're going to build in redundancy to catch those 20 patients. And of those 20 patients, capture another 16, which gives us a 96% reliability because of that redundancy. So, you know, you build that in and you end up having your 95% by having that redundancy in those two checks. So, when designing a new process, it is important to ensure they are reliable, which means achieving 85 or greater, 85% or greater success rate. Only use this on non-catastrophic processes. Standardize, simplify, and test, and build in redundancies to improve those outcomes.