Hi, this is Wayne Rivers at FBI, and *We Build Better Contractors*.

This week, I want to talk about improving outcomes with zero increase in skill. Doesn't that sound like a ... I mean, it sounds too good to be true. The idea came from a book called The Checklist Manifesto by Atul Gawande, who also wrote Being Mortal, a great, great book. I recommend it as well. Gawande's mission was to improve healthcare around the world by using checklists. You've heard us talk about checklists before. Did it work? Did he achieve that goal? Well, I'll let you read the book and find out. But I wouldn't be talking about it if it was a flop, would I? Checklists originated with Boeing in 1935, they had a plane rolling out for the army. They had big plans for this, and the plane went up, it took off, it flew a bit, it nosed in, crashed and burnt.

And the press said, oh my gosh, this is the most complicated plane ever built. It's more than one person can fly. It almost broke Boeing. It was a disaster. The army bought planes from somebody else. But Boeing test pilots were not convinced. They thought there's got to be a way to simplify this incredibly complex machine, which became the B-17 bomber, most successful bomber in military aviation history most likely. There has to be a way to simplify, and Boeing created at that point, the checklist. And Boeing remains the premier go-to source for checklists for any industry now, whether it's medicine or aviation or whatever. So, what about this is important to you?

Well, the thing that fascinated me about this book was where did Gawande go to learn about how checklists work in action? He's a physician in an urban hospital in Boston. He leaves work one day. He goes around the corner and there's this huge construction project, 350,000 square foot project. It was a full city block, 14 stories, 11 stories high, but 3 additional stories underground, 2 to 500 workers on the job site at any given time, $360 million project, almost 4,000 tons of steel, 13,000 yards of concrete, 64,000 feet of piping, 47 miles of conduit, 95 miles of wiring. And he looks at this immense thing and he says, how in the world does everybody know what they're doing? And he talked to the supervisor on the job and the guy says, construction project's a lot like a body that you work on as a physician. It's got a skin, it's got a skeleton, it's got a vascular system, the plumbing, it's got a breathing system, the HVAC, it's got a nervous system, the wiring. So, we're essentially putting together a body here.

And Gawande had two questions. How could they be sure they had the right knowledge at hand? And the second thing was, how could they be sure they were applying the knowledge correctly? Interesting. Throughout history, big structures have been built by master builders. If you look at the great cathedrals of Western Europe, well, Eastern and Western Europe, those were built by master builders. There was one person with this knowledge in their heads, and they were capable of running a complete complex job site. Well, by the middle of the 20th century, the master builder was gone. Buildings were much too complex for any one person to have all that stuff up here. Gawande wrote, "The variety and sophistication of all construction processes overwhelmed the ability of any one individual." This is an absolutely true statement. So, what checklist did he observe on this job site?

Well, in the job site trailer, and if this was in the early 2000s, there was a big, printed schedule. And of course, it had all the various trades and all that stuff in different colors and the timing and all that, the critical path. On the other side of the trailer is the submittal schedule. And that's what got his attention. The submittal schedule. Because what happens in construction apparently at that time did not happen in medicine. He said the major advance in the science of construction, he said a science. We think of it as the business of construction, the science of construction. Think about that. The big advance, the major advance in the science of construction over the decades has been the perfection of tracking communication. That's the submittal log.

Now it's not perfect. We all know that there's no such thing as a perfect process, but that's what construction, that's one of the things he used to revolutionize medicine around the world: communication. He said the operating theater is like a job site, but the doctors and the staff in an urban hospital, like in the city of Boston, rarely knew each other's names. They

all had their profession, they all had their specialty, even the subspecialty, but they didn't know each other's names. And that was a huge thing for him. So, he said when doctors and operating teams learned each other's names at the outset, evaluations of the quality of their communications jumped, teamwork, they said went up by 35%. This is self-evaluated. The one thing that's not self-evaluated that was amazing. The turnover rate for operating room nurses dropped by two thirds, just because everybody now felt like they were part of the team, and they knew each other.

Now, how does this apply to construction? We're talking about operating rooms. It seems like a long way from construction. Two things, I think. First, superintendents inform and set the tone for the job. They create the culture of the job, if you will. And if they use names, good eye contact, respectful communications, handshaking, getting to knows, it might be impossible to know the names of all 2 to 500 people on a job site, any given day. But I know that in talking to my guys, my former contractors, where they had 2 to 300 employees in their companies, they made an effort as the CEOs to try to learn every single name. They didn't always get it right, but the more names they knew and the more personal they could be with people on the job sites, the better things seemed to work.

My guy said two things that you can take back to your construction company. First, almost everybody puts names on hardhats now. These guys recommend putting the names on the front and back of the hardhats or the front and back of vests. That way, if somebody's bent over, attending to a task and you can't see their face, you still know who they are. And you can say, hey Dennis, or whoever it happens to be. And that makes a difference.

The second thing they said is that probably the most applicable piece of this information with the names is in the area of safety. And the way John Woodcock said it was that ... Well, first of all, Kevin Albanese said that "Safety is about courage and grace." I mean, this is really good stuff. "Safety is about courage and grace. Courage to call out unsafe behavior. And the grace to receive that call out without judgment or getting angry." Safety is about courage and grace. Think about that. Tremendous.

And John Woodcock said the names, using people's names probably has the greatest impact in safety. And here's his example. "It's a lot easier to walk past a guy doing something stupid and unsafe when you don't know his name versus saying, Hey, Wayne, put your safety glasses on. I want you to be able to see your kids when you get home tonight." That is so much more personal and so much more relevant. So, the two things that I think we can take away from this book, the importance of knowing people's names and using them, and the application of using those names, especially in the area of safety. I'd like to hear what you think. This is Wayne Rivers at FBI, and *We Build Better Contractors*.