Session date: 07/25/2016

Series: QIN

Session title: Quality Improvement Methods: A Revised Handbook

Presenter: David Belson

*This is an unedited transcript of this session. As such, it may contain omissions or errors due to sound quality or misinterpretation. For clarification or verification of any points in the transcript, please refer to the audio version posted at* [*www.hsrd.research.va.gov/cyberseminars/catalog-archive.cfm*](http://www.hsrd.research.va.gov/cyberseminars/catalog-archive.cfm)

Moderator: And we are at the top of the hour now so I would like to introduce our presenter. We have Dr. David Belson joining us today. He’s an adjunct professor and senior researcher at the Daniel J. Epstein Department of Industrial and Systems Engineering at the Viterbi School of Engineering, University of Southern California. At this time, I would like to turn it over to you Dr. Belson.

David Belson: OK Molly thanks. Thank you. Can you hear me OK and see my screen?

Moderator: We can, thank you.

David Belson: OK well, thank you for giving me the opportunity to make this presentation and I really have been looking forward to it as the whole topic here is really a passion of mine. I’ve been involved in healthcare performance and quality improvement for the last 15 years. That’s basically all I do. I’ve been in industrial engineering considerably longer than that, but in any event, as Molly said, I’m on the faculty at USC School of Engineering and I work with hospitals, quite a few of them.

I also work for the State of California as well as this project for the VA as well as individual hospitals. So what I want to do today is give you a little background in terms of this handbook that we’ve updated and a little bit about the material in it and how you can make use of it. Again, I look forward to any feedback or comments. My email addresses are at the end of the presentation, and so let me proceed.

Many of you may be familiar with the whole area of quality improvement and performance improvement, but those of you who aren’t, you should know that this subject has a fairly long history. A lot of the ideas and methods and improvement ideas come from other industries than healthcare. As many of you also may know, the Toyota Motor Company in Japan played a big role in kind of gathering together a lot of the improvement methods and tools for the Toyota company and they were very effective.

This was in, basically the 1950’s and ‘60’s and then after Toyota, a lot of these methods spread to other industries including healthcare. The methodologies, and there’s a bunch of them, there's a variety of different ideas, tools, methods, whatever you want to call them, that can be used for making things better, for improving the impact on research, for making the research more effective as well as the performance in hospitals and clinics. So there's quite a few of these ideas and methods.

I’ve been teaching them for about 15 years as well as using them in hospitals and clinics, so it seemed like a good idea to kind of gather it all together in more of a handbook or almost a dictionary kind of format, say what are the ideas and what are the methods that are available to us and moreover, when do we use them? Some methods are useful at the beginning of things, developing ideas and looking at hypotheses. Other tools are useful for implementing changes and having impact.

So the idea of this is to kind of cover all of these methods that you might want to use and no one project would they all be applicable, but for your particular research or project or QI effort, certainly are likely to be effective. So in terms of the presentation today, I wanted to go kind of a quick overview of these methods and where they’re used and as Molly said, if you have questions, please send them in. There’ll be time at the end of the presentation for some discussion of these questions.

But first I want to do an overview of these various QI ideas. Then I’m going to talk about an algorithm that we developed to help you select which particular method will apply to your particular problem. So I’ll also be referring to the VA website that’s also publicly available to help you select these particular methods and see which ones are more useful for you. So that’s what I want to cover today.

So like I said, for about the past 15 or more years, I’ve been working on QI and improvement ideas such as Lean which is the term that is used to apply to a lot of this material. Fifteen, 10 years ago, it wasn’t quite so common. We get around to a lot of different hospitals and early on, they kind of were not sure what I was talking about or pretty skeptical, but in recent times, in the last few years, it’s really become widespread.

I don’t know about your particular location, but as I get around to hospitals, I’ve probably, in the last 10 or 15 years, worked at almost 100 different hospitals. They have become very commonplace. People know about them, if not very familiar with them, but they certainly know about the idea of quality improvement, of Lean, or a lot of these tools. It’s become kind of a common idea.

Moreover, I know at our medical school and many of the medical schools, that providers are recently being trained in these ideas, almost a requirement or sometimes it is a requirement, for provider education to know about QI and Lean methods and so on, such as covered in this handbook. However, that doesn’t mean everything is taken care of. It’s been my experience and others I’ve talked to and others I know at the VA, that having an impact from these things is not so easy. It’s not so simple.

As everyone is aware I think in this country, our costs continue to go up. There's a lot of barriers to making change. It’s not easy to make change. I’m not saying that these methods don’t work, they do work, there's plenty of written material and stories and people that can confirm that these methods work, but the job is far from done. The cost curve has not certainly turned around totally and costs continue to rise, so the need to use these methods is still very much there and very important.

So I’m talking here really about performance improvement, quality improvement as it applies to research as well as to healthcare generally. I think, at least I feel that there's really an obligation here to use these methods while providers, administrators what have you, do their job and work in their particular area. I think that everyone really ought to have at least as part of their job, the need to use some of these ideas to make sure that the resources of the institution are being used efficiently and we get the results out of it that we need.

So that’s kind of the topic we’re talking about here. Why a handbook? Well, and moreover, why a handbook for researchers? Well, researchers have limited resources as well. How do you get the maximum out of this, the dollars that are available to do research? Problems are often complex, have multiple factors involved, multiple constraints on them. How do we make sure that we’re going to navigate those properly and then we understand all the aspects of the problem as well as are we addressing the proper problem?

So the QI tools are useful for that as well. Still another aspect that’s important and that’s not always fully appreciated I think in a lot of research, for a while I was doing a review of research applications and while QI ideas were often mentioned, it seemed like they weren’t fully integrated into their research project. There were other changes in healthcare.

So it’s important to make sure that changes are sustained and that it’s not a temporary change. It’s not a temporary improvement and that the ideas are spread throughout wherever the work is being done. So QI tools are certainly, I feel, and I’m prejudiced, but relevant to the topic of research. We want to get the most that we can possibly get from research or other healthcare activities plus I believe that proposals for research grants and that sort of thing, if they properly include these methods and show that they have an understanding of them, they’re more likely to be approved.

So this handbook, which, as Molly mentioned in the start, or as mentioned in slides in this presentation, is available. It was first published a couple of years ago and so this current edition revises a lot of the descriptions. Some of them may be new to you, but in any event, there's this handbook which discusses 55 different performance improvement methods. So what we’ve got in the handbook is a description of each method. It’s a handbook, it’s not a complete training on each of these methods.

It’s more of a brief description. Training is available from a variety of resources, which I also list in the handbook, as well as literature on each method, where you can get more information on each method. I also have an example of how each method is used and brief set of steps that you use to implement any of these methods or tools. Like I say, it’s a new edition of the previous book and it’s a brief description. It’s not in great detail.

So, Molly, we wanted at this point to kind of ask a question of what is the experience of participants in this.

Moderator: Thank you. So for our attendees, you do have a poll up on your screen and go ahead and click the white circle next to your response. We’d like to know which best describes your QI experience. You have no QI training or experience, you have done improvement work but no formal training, have QI training but do not use it, have done QI work, have done and led QI projects. It looks like we’ve had about two-thirds of our audience respond and answers are still coming in, so we’ll give people a few more seconds to get their replies in.

OK, it looks like we’re about 80 percent response rate so I’m going to go ahead and close the poll down and share those results. Fourteen percent of our respondents have no QI training or experience. About a quarter of our audience has done improvement work but no formal training. Four percent have QI training but do not use it. Seventeen percent have done QI work and 40 percent have done and led QI projects. So thank you to those respondents and I’m going to turn it back over to you now David.

David Belson: OK. So that was interesting. It seems like a majority of people have done QI work or led QI work so you have some experience in this area. If you’ve done that, you probably would follow this kind of a sequence where there's some issue, some problem, some improvement desire at the healthcare institution, some change that you want to make and then the job of the QI leadership at any rate needs to decide well, what messes am I going to use to make the improvement or to make sure the change is effective and it’s the same and so on.

This would apply to any kind of improvement. Sometimes it sounds very generic but it is generic in a real sense and this kind of sequence of figuring things out, identifying how you’re going to go about it and implementing it, applies to clinical problems as well as non-clinical problems. I’ve worked on clinical problems in various parts of hospitals and clinics and sometimes they’re quite focused on clinical issues. Sometimes they’re not.

So what I’m trying to show here is kind of a general idea and one challenge is well what particular tools or methods should we be using. So here’s kind of a partial list as an example of some of the QI methods or tools that people use. I’ve got to admit, a little bit of stumbling here of do I use the term methods or tools. To me the terms are kind of synonymous, whatever you want to call it, methods or tools.

These are various, and only a partial list, of some of the methods that people use to do quality improvement. Like I said, the handbook kind of covers all these. One challenge with the area of quality improvement seems to me is the nomenclature, the names for these things, sometimes they add some confusion, like Kaizen or Kaizen event. It’s not entirely new kind of idea. The event is generally a group meeting working on a particular problem.

The point and the advantage of the QI kind of field is that the thought that’s going into specifically Kaizen and Kaizen event is that it brings some ideas, a way to organize that kind of effort in a better way than it’s been done in the past. I know I’ve organized and led and participated in a number of Kaizen events and afterwards, the people involved say this is really a big improvement over the kind of committee meetings or whatever we did in the past in terms of getting improvements made.

Another thing about the terminology in this area is the idea of a Gemba or observing a real process. Because it kind of came through Toyota, there’s a Japanese terminology, there’s a Japanese label that could apply to a lot of these methods. The ideas are good. The observing, we need to observe things, but the Gemba specifically idea of how you go about observing and the constraints and the requirements you put on observing, adds some useful ideas, I think.

Just simply saying well we need to observe this check-in process or we need to observe this lab test or whatever it is we’re observing by thinking about the Lean or Japanese or QI approach makes it a more organized kind of effort to make sure you really observe the whole thing. So the terms, well they don’t always provide a totally new idea, they do add useful things that you might not have thought of, but you need to do when you’re doing observing.

Another problem with the names of these things, that drives me crazy at times, is there’s a lot of overlap, particularly in the vernacular of how people use terminology. I have heard, and I know many of you have had some QI training, terms like Six Sigma, QI, PI, QFD, there's a number of labels that overlap at the very least or some people call the same thing by different names. Sometimes Lean Six Sigma is used.

There was a study done a few years ago of QI, if you will, departments, or whatever they call their department, 54 different labels came up for the same kind or organizational unit. So the labels for all this are a bit fuzzy. I tried to include in the handbook the most common names, the most commonly used names and also tried to reference what other names are used for these things.

So hopefully, it’ll clear up some of the confusion. there's probably no point of trying to just focus on well is this really Lean or is this really Six Sigma. I think there's a difference and some of these tools fall under Lean and some fall under Six Sigma. I tried to include all of it as much as possible in this handbook.

So let me just briefly talk about a few of the methods or tools that are covered here. I know some of you are probably quite familiar with this, some it may be something new. One tool that I find very, very useful and some of the methods or tools are useful, almost always, and some of the methods or tools are used just occasionally. They’re very valuable in the right situation but they’re not always applicable.

One method that I find very powerful and useful is the idea of mapping, of creating a diagram that kind of walks you through the process and makes it explicit and I find its useful in most improvement efforts and it has some powerful effects, one of which is to make things explicit. I know I’ve involved in a project today where we have a map such as this and by having a map, it gives us a way to talk to people about the process without assuming they understand it. So by making it graphic such as this, you can verify is this the way things work or is it not.

At least the ones I’ve done, almost never does my first diagram remain unchanged. Almost always it’s well, no, this isn’t the way it works or it also, like the project I’m working on now, by showing a diagram to different people. We’re discovering that different people have a different understanding of just how things are supposed to work. So it’s very useful to map things out. It’s one of the more common QI tools and another advantage of it is fairly self-evident. You can, just by looking at it, you can see what we’re trying to do here, the sequence of events, what follows what.

So it’s a kind of self-evident tool and it’s helpful in that way. Actually this is a map from a project I’m currently working on. It can be complex but you can perhaps see from this, we put it up on the wall. It’s a big 4 x 6-foot sheet of paper and in discussion, sticky notes get stuck on it. Here’s things we need to change or here’s a problem. So a number of these tools are not just a tool that’s used in isolation, but they’re often used in some kind of collaboration where we can use it in a discussion. We can record ideas. We can move the process forward and it doesn’t have to be anything terribly formal.

This one is somewhat formal as you can see. But it becomes a working document. You can put a lot of effort into this or a little bit of effort. Sometimes it becomes a little bit crazy, this is a joke. But the diagrams can get very big or sometimes they’re really tiny. I did a project not long ago where we did a map and it really only consisted of four blocks. A quick discussion with several nurses, we realized there was duplication of effort and putting together nursing notes, figured out what the change ought to be. That wasn’t this diagram here, figured out what the change ought to be and proceeded and the whole QI effort was completed in less than a day.

So maps are just one of the very useful tools of QI. I’m going to show you a little about it and also the literature again and references and what have you in the handbook. Kaizen is another commonly used tool, idea of a focus on making change and making sure the change is for the good, identify the issues. It’s a collaborative thing, it’s not open-ended. It has a beginning and an end. It’s not a committee, but an effort to make a change and make sure it’s implemented the way the group involves.

Another aspect of a lot of the QI tools is to make sure that its collaborative, that all the people who need to be involved are involved and the people who really understand how things work are involved as well. So that’s one of the more commonly used of these methods or tools. Still another one that’s I think terribly important is, in terms of making changes, the research may provide an intervention, a new way of doing one thing or another, but how you go about implementing it is key.

The QI field and the Toyota Lean and so on have developed ideas how you go about implementing change once you’ve figured out the change. I know I’ve looked at a number of research documents where they did a great job of figuring out how they’re going to identify some intervention, but didn’t address the issue of how it gets implemented and let alone what’s the best way to implement things.

Well, a lot of, there's been a huge amount of experience in finding what works and what doesn’t work and making changes. The PDSA or plan, do, study, act is one acronym for the idea of how to best implement change. The key element of this is that you do things incrementally, often making a big global change all at once is not a good idea. It’s better to do it in increments, analyze how what worked and what didn’t work, improve on it and then continue on with a revised implementation.

There may be many iterations before the change is fully made. Also, this is one example of terminology problems in QI but depending on where you are or what teacher you’ve had or what consultant you’re using or what part of the organization you belong to, it may be more towards the Lean idea in terms of implementation PDSA. Some organizations focus on Six Sigma, which tends to use the DMAIC or variations on that. So different places have different ideas about just how to do QI as well as how to describe it.

I know some healthcare institutions I work with use the Japanese terminology for these things like in the case of waste, which is an important idea in Lean. Muda, a Japanese term for waste, some organizations use the Japanese term because it kind of makes it unique or unusual or calls your attention to it. Still others don’t use the Japanese terminology.

So, like I said, these methods, but their exact description varies from place to place. Another key part of quality improvement and implementing research is after that, one needs to make sure that the change is sustained. At least in terms of the healthcare institutions I worked with, this is a relatively new thing in some places, is paying attention to the issue of sustained change and what can we do to make sure the change doesn’t fall back into the previous pattern of behavior what have you. The idea of performance scores, I have in the handbook some examples of literature, sources, what have you.

The idea that we’re going to make the performance, the results very visible to the staff, use it in a very obvious way, document the impact and so on in order to make sure the change remains in place. I know it’s been a challenge for me in various QI projects where we’ve identified a great improvement, we got it implemented but come back a year later and we’re back to the previous way of doing things and the performance isn’t sustained.

So by making it visible, a number of organizations use these ideas of performance boards as part of a daily huddle. Again, you call attention to how things are working. So another one of the QI tools, so I wanted to just kind of give a sample of what I’m talking about and next I’ll talk more about the handbook and the website that hopefully is useful in terms of identifying and figuring out what tools or methods you need to use.

First we want to do another poll question, so Molly, if you want to.

Moderator: Thank you. So for attendees, you have the second poll question up on your screen now. Just click the circle next to your response. So we’re trying to get an idea of what your primary role is. The answers are QI/PI specialist, clinician, researcher, student trainee or fellow, or all of the above.

It looks like about two-thirds of our audience has replied and we’ll give people a few more seconds. All right, I see a pretty clear trend so I’m going to go ahead and close this out and share those results. Twenty percent of our audience responded QI/PI specialist, 16 percent clinician, almost half of our audience researcher, 13 percent student trainee or fellow and four percent all of the above. Thank you to our respondents and we’re back on your slides.

David Belson: OK. Molly, can you see my screen?

Moderator: Yes, thank you.

David Belson: I am putting this QI handbook screen.

Moderator: Yes.

David Belson: OK so interesting, so a good chunk of you are research area, which is great because that’s the focus of this handbook. The handbook is described here on this website page, which is, the link of which is down below, and again, the handbook is a relatively concise description of these various tools or methods. Besides just doing that, I wanted to be able to provide the user some assistance in figuring out what to do.

I know, I teach a class at USC on this same material and often students are asking me well, how do I know which method to use when. For the longest time, my stock answer was well, that’s the art. By just knowing all these methods, you have the ability to draw on these things and by understanding the various methods, you should be able to intellectually or creatively figure out what to use.

I thought we maybe could go a little bit further and provide a little more assistance. It seems that depending on the phase of the work, different methods are applicable depending on where you’re at. Some projects are kind of on the early stages here, to the left, where you need to figure out just what is the problem, what is it I’m trying to do here. Do I have or do I need to develop a hypothesis that I’m going to test in my research or part of an improvement project.

So some of these tools are more applicable to kind of understanding things, understanding what’s going on. Generally useful in the, kind of developing and understanding of the process. All of these tools here, I’ve seen all of these tools used at one point or another, but some of these tools are particularly good for understanding what’s going on. Sometimes it’s also useful, these beginning tools, to share with others to make sure that everybody agrees that that’s the problem and we’re focusing on the right thing.

Then maybe things are a little further along in that where we develop or have developed some alternatives, some changes that might take place. So maybe we kind of need to analyze these things either from an economic standpoint or clinical standpoint, an effectiveness standpoint on one side or another, we need to evaluate some of the changes that we’re considering. Often there’s more than just one intervention or more than one change or variations on that change.

So some tools are useful for kind of that evaluation process. Still further along, maybe we need, once we really figure it out, what’s the best choice here and the change that we need to make. How do we convert that into something that we can implement, a protocol, a practice of some sort, it could be a physical change? How do we figure out and detail the change that we want to make? So still other tools are useful for that purpose and then finally, we may need to, or we do need to implement it. Maybe you need to evaluate that implantation with things like PDSA and so on, are useful to make sure the change is implemented and the factors.

Again, I can’t emphasize enough that stuff really has to be there. It really has to be something to make sure the change takes place, that the intervention is implemented so that we can evaluate its effectiveness, if not just to benefit from the change. So depending on where you are, different ideas, different methods, different tools are applicable.

So also on this website is a tool for selecting methods and what one does and the way this algorithm works is you put in the different attributes of the particular problem you’re working on, the issue, the change, whatever it might be. Where are you at in the project, some information categorizing what kind of change is involved here and then they may not be, some tools are applicable to more than one phase of a project. So there’s a scoring system and the tool selects the best five.

Like I said, there's 55 there and maybe, almost every one of these are applicable but some are more applicable than others and you need to decide which tool you’re going to use. So the website then sorts these things and scores the top five, tells you those plus there's some tools that are pretty much always applicable or more broad kind of ideas. So include those as well as the specific ones applicable to a certain situation.

So this is the screenshot of the webpage where you kind of describe the project, select which of these attributes are relevant to your particular project. So you check those and this is again tied in with the handbook, picking the best method. Try to make it a little more than just a gut feel for what’s applicable. Also, I want to add a caveat here that the recommendations for this are what seems to be the most relevant tool for a particular kind of problem, but again, all these tools are applicable or potentially applicable so hopefully this is kind of a starting point or provide you a starting point of what methods to be using.

It may bring up some things that you didn’t consider before. I’ve been using this thing now for a couple of years and often up pops a tool and I hadn’t really thought of in terms of my particular project and so causing me to think about it. Oh yes, maybe there is a usefulness of that, at least in general. The idea here is to provide a starting point of what you might consider in a particular QI effort.

So as you check off these various attributes and the various attributes of your project, and you get back this list of five methods you really ought to consider in this particular situation as well as those that are kind of generally useful in all sorts of projects. So the tool is available. The link is provided. You can also go to these individual tools and pick the one that you’re interested in or would like to learn more about and see the material on just that particular method or you can also access the entire handbook and use it online or download it.

So the material can be used in a variety of different ways. Now, the handbook also is intended kind of as a starting point. There's certainly a lot of ways to get more information about QI methods. Like I say, the implementation of QI is really expanded in recent years, become much more commonplace and there's also more availability of training and information about these QI ideas. I don’t know about the particular institution you’re at, but I know the hospitals, particularly larger ones that I visit, increasingly have internal programs through the human resources department or the clinical areas or what have you, with internal training programs. I know the VA had some of that.

There's a lot of courses out there online or in person. I know our university does such training. Some of the courses are a session long or longer. Some are short; some are one day programs. There's a lot of QI training available that also includes certificates so you’re certified in terms of QI, Lean, Six Sigma. Those are available. In terms of the whole QI area and Lean and Six Sigma, it turns out that there's no one organization that owns this topic.

So it’s not like, in some fields, there's a certificate that’s the gold standard, that’s universally accepted certificate. Not true in QI as far as I know. Some kind of claim to do that, but I don’t think it’s really true. There's a project management certification that’s a single certificate that’s applicable everywhere, not true in this area. Like I said, there's a number of certificate programs. We at USC do one through the Institute of Industrial and Systems Engineers.

There's quite a bit of literature, books, I’ve referenced a number of them in the handbook. There's simulations available that you can use. So there’s a lot of different sources for getting more information about quality improvement. Here’s some more material on it. There's a number of professional organizations at the VA and elsewhere that provide training, that provide literature, over at AHRQ, there's a lot of research and publications related to quality improvement. The Institute for Healthcare Improvement and others provide opportunity to meet with others who work in this area as well as conferences, conventions, or what have you.

There's a whole host of professional organizations in the QI field, as well as books and periodicals that are increasingly updated and made available. There's a lot of consulting firms that do projects. At least as far as I see in visiting a lot of hospitals, many of the large ones \_\_\_\_\_ [00:36:53]. Most of the large ones seem to have consultants of various sorts working in this area. There are websites. There is training.

I’ve tried to refer them in the handbook. Many colleges and universities, I just saw a list yesterday from the industrial engineering field and there was probably 30 universities that provide programs, generally degree programs in industrial engineering with a focus on healthcare as well; I teach in industrial engineering and also in master of health administration programs that provide training in QI. So there's quite a lot of sources for more information about QI and going in various degrees of depth.

So this is kind of as far as I wanted to cover today. Again, the website that is shown here, access to the website where you have a tool to select what particular methods are applicable to your particular project. The handbook is available as a PDF at the website shown here. Also at the website, there's more information about QI at the third link that’s shown there if you want more information about QI.

So hopefully that was informative and helpful. Hopefully you can make good use of this handbook on QI. Here’s my email address. If you have any questions, I’d be happy to hear from you at a later date and Molly, I guess I’ll turn it back to you at this point.

Moderator: Excellent, thank you so much. We do have some good pending questions. For those of you that joined us after the top of the hour, to submit a question or a comment, please use the questions section of the go-to webinar control panel located on the right hand side of your screen. Just click the plus sign next to the word questions. That will expand the dialogue box. You can then submit your question or comment there.

If you are having issues with that control panel, you can always type your question into [cyberseminar@va.gov](mailto:cyberseminar@va.gov). The first question, you mentioned visiting between 100 and 150 hospitals over the last 10 to 15 years, roughly how many of them tried to use Lean and related QI methods to achieve more than targeted incremental change? Please provide some examples. Did any hospitals use Lean to drive system wide change and transformation?

David Belson: Good question. First of all, as I mentioned earlier, there's definitely been a trend where it’s become much more commonplace. The level of adoption varies greatly. Few places are fully, what should I say, committed to the whole idea. I was at a small hospital about a week ago, a rural hospital, and they were really into this stuff. Partly I had done some training there, but it was much more than that. We did some work, we had a Kaizen event.

They wanted to make some improvements in the emergency department. There was people from all different parts of this rather small hospital, from nursing, physicians, IT, administration, security, all sorts of areas. They were very, very committed. I think it’s really been a fundamental part of their hospital. Others, the involvement is sometimes heavily.

There's a feel, I think I talked about it in the handbook, of organizational maturity and in terms of 100 percent, there's probably none. In terms of kind of leaders, there's some hospitals, Virginia Mason in Seattle is quite visible in this, Denver Health, a number of large hospital systems are pretty committed to it. I work a great deal with Los Angeles County which is five large hospitals. Only in the last couple of years has it become important to them. Don’t quote me, but from what I’ve observed, now it’s very important and from the senior executive levels on down, they’re really putting a focus on it.

As far as how much its affected the systems and the way of doing business at hospitals, particular larger ones, I’d say there's a long way to go. Maybe 10 or 20 percent of the hospitals have made significant, I’m sorry, maybe 10 or 20 percent of the systems at the hospital have been improved through quality improvement and Lean. In terms of some hospitals, there’s very little activity. One thing that’s changed is almost all of the larger hospitals, maybe all, have some interest in Lean at this point. It’s gone from maybe 5 or 10 percent to nearly 100 percent with an interest in Lean. Implementation of Lean, I’d say has got a long way to go.

It’s hard to put a number on it, but if I had to, it’s probably less than 25 percent of the operations of the place are impacted by Lean at this point. Sorry to be so vague, but I haven’t seen any good data on it, but that would be an interesting effort to do.

Moderator: Thank you for that reply. The next question, do you use business process reengineering with flow charting as-is and to-be states?

David Belson: Yes. In my mind, business process reengineering is another kind of label of all these things, these different things to different people. I’ve been involved in industrial engineering my whole life and business process engineering was a common term used longer than 15 years ago and I hear it less often now. In terms of process mapping, like I said, I use it a lot. We generally use it to both describe the current system as well as the future state.

There's many different kinds of maps. I’ve tried to describe them in the handbook. But yes, I would say it’s almost the most common tool, is to do a map of here’s the current process, here’s the current state and another map that says here’s the future state. One of the advantages is it gives us an opportunity to carry on an explicit discussion of just how things are going to work in the future.

Moderator: Thank you. The next question, in your experience, how important have you found it to get buy in from the stakeholders before implementing any systematic wide changes?

David Belson: Oh its absolutely critical to get buy in and without buy in, it’s very obvious that things don’t change. I did a project a few years ago at a large county hospital, Los Angeles County, where we wanted to do, they said they wanted to do a, make some improvements in readmission rate and the kick off meeting was to be with all executives, but the executives found other reasons to be elsewhere. So the initial meeting was mostly nursing staff and well we put a lot of effort and a lot of hours into making changes.

The results were minimal if any. So without buy in of all the interested parties, in the past, getting physician involvement was a real challenge. It’s not so much true anymore, at least I find. But buy in from physicians as well as the rest of the staff is a lot easier to do than it used to be, but its absolutely critical.

Moderator: Thank you. A lot of people have written in to say thank you for this very clear presentation. It’s extremely helpful. I’ll be sharing this with my colleagues, so thank you. That is the final pending question at this time. Oh no, here we go. Have you had any instances with the dental professionals?

David Belson: I’ve got to admit I haven’t worked in the dental area. I can’t say why, but certainly would be an interesting thing to do. It impresses me that a lot of dental practices are sort of like outpatient clinic kind of flow. I’ve done a lot of work and a lot of these tools are very applicable to clinical, outpatient clinic settings where the workflow and the patient flow needs to be efficient and effective. I can’t see why dental would be, pose any insurmountable challenges but I’ve got to admit, I’ve not done work in the dental area.

Moderator: Thank you. Do you know about integrated operations platform, IOP, where projects are loaded into a dashboard?

David Belson: I’m not familiar with that. I’d like to know more about it. Dashboard is, I didn’t mention it here, but certainly it’s in the handbook and one of the popular tools, the idea of making visible what performance looks like and doing it in a graphic, kind of consolidated way, but I’m not familiar with that particular tool.

Moderator: Thank you. That is the final pending question. Do you have any concluding comments you’d like to give?

David Belson: Well I don’t necessarily have a comment that’s other than what I kind of already said. QI is, it’s encouraging to me that its rapidly increasing in use and ideas such as Lean, I think there's still a lot to do. These things do work. They do have an impact. I’ve seen it, measured it and it’s not just a theoretical kind of idea, but a real idea and a practical idea. I hope you’re able to make use of these things as a taxpayer, as a patient, things working in such a way to reduce costs but still produce, give you better results as a benefit to us all.

Again, thank you for the opportunity to participate.

Moderator: Thank you. One last question has come in, with the VA so heavily involved in true research, do you ever find it challenging to clearly define the difference in QI versus research with regards to measurement?

David Belson: I think there's a bit of a difference between those two, not necessarily. QI is more focused on the ideas of efficiency, of getting the most out of the resources, productivity getting the most output relative to the input whereas research of course is there to test hypotheses and solve problems and provide better tools. It seems to me that the two ideas really go hand in hand. As I mentioned earlier, and how I really got involved in this effort, was working with the VA in terms of reviewing research applications. I was actually shocked, this was, let’s see, four or five years ago, I was actually shocked to see many really expensive research efforts did not include any of these QI ideas.

Well the term QI doesn’t need to be there. It seems to me there really needs to be some focus on how you go about implementing the results of the research, how you go about making sure it’s done in a way that has real impact. I think these ideas are terribly applicable to research projects. I was, after reading quite a few research proposals, I was shocked to see some didn’t make any consideration of the QI ideas.

Some did, but did it in a way you could kind of tell that the people writing the grant requests or the proposal didn’t, were using improper terms and really didn’t know what they were actually talking about. So maybe I’m prejudiced, but it seems to me that it’s an absolutely necessary element of research and from people who have spoken to me, from the VA about this, have said that’s how the VA looks at it as well.

Moderator: Great. Well I’d like to thank you very much Dr. Belson for coming on and lending your expertise to the field and also for your work on updating the handbook. Of course, thank you to our attendees for joining us. I’m going to close out the session momentarily and a feedback survey will populate on your screen. Please take just a few seconds to answer those questions. We do look closely at your responses. It helps us to improve presentations we’ve already given as well as generate ideas for new sessions to facilitate.

So once again, thank you everyone for joining us and this does conclude today’s HSR&D cyber seminar. Thank you David.