

Champion For Lean Quality Improvement Process as a method of On-going Continuous Improvement

Abstract

I championed Lean QI in our Northeast NC Partnership for Public Health (NENCPPH) as well as to the NC Center for Public Health Quality and local government as a method for continuous quality improvement. Lean is an improvement methodology based on customer centered value through elimination of non value added waste such as; time, motion, materials, space, inventory and money. Lean practices empower employees and they become committed to continuous quality improvement, a continuous process of change and adaptation because they find not only do they have a voice, their jobs become easier and results to the customer better. To be successful Lean must engage all employees because in Lean people are highly valued. Employees must be challenged and empowered and they need to feel secure, so management needs to be on board with Lean methodology.

I was the Lead Health Director on the Lean project in our Partnership and we implemented Lean Kaizen events in all ten health departments using our incubator funds. We have additional Lean Kaizen events scheduled for early 2010 in at least seven of our counties. There is a letter of intent that Dr. Greg Randolph sent in from his NC Center for Public Health Quality with collaboration from our partnership and UNC research staff for a research grant to look at five additional Lean Kaizen events in our Partnership health departments and also two Kaizen events in areas of State Public Health to see if the research results would lend it to becoming a "Best Practice" and a part of the new NC Public Health Quality program for all the health departments in the State. We should hear on that letter by mid November. In my county in January 2010 we will be doing a Lean kaizen event in a combined Health Department and County Department setting, the latter being under the County Manager. The Lean trainings were overwhelmingly positive for Health Department staff and management. In addition to the opportunity to promote the use of Lean QI in Public Health and Government agencies, this project provided me an opportunity to further develop my leadership, influence and communication skills.

Introduction/Background

The Northeast NC Partnership for Public Health (NENCPPH) is a collaboration of 18 counties, ten health departments and districts in northeastern NC. It is now one of the six incubators in North Carolina. Our partnership actually began in 1999 (pre-NC incubators) with the health directors meeting and writing a grant to explore ways we could share resources across our counties to provide the core public health services. In 2008 one of our project goals was to identify practices being used in businesses that we might adopt to use in Public Health for ways to be more efficient in our business practices. Our

Partnership Executive Director, Joanne Eddy, MSW researched many different business practices and she came upon Lean, an approach that uses less of everything to give you more. It is a strategy that meets the needs of the customer they way they want it, enables a business to provide higher quality at lower cost and more efficiently. It also develops a business culture of continuous, evolutionary change and adaptation.

Staff from NC State Industrial Extension Services (IES) had been teaching Lean predominately to manufacturing plants and businesses, but had begun to work with some healthcare providers. After hearing about the savings Lean had provided for businesses located in Northeastern North Carolina with whom IES had worked, we were very interested to see if the IES staff would be receptive to branching into public health. They were. Thus we developed a plan for them to visit Beaufort County Health Department and observe and learn about what we do in public health and then for them to structure their training to our environment. Noteworthy is the IES staff does this Lean training onsite and employees get hands on experience actually working on a process that they have determined needs improvement.

With the current economic recession, cutbacks, limited resources, and in Public Health more clients to be seen, finding ways to work smarter and more efficiently is a necessity. Quality Improvement must be part of the way we work in Public Health. After implementing Lean in our Health Departments we had positive results surprisingly that greatly exceeded our expectations. Health department employees utilized their time and resources more efficiently and effectively and actually saved resources, time and money. Changes also spread to other parts of the departments. However, the noticeable evidence of the positive impact on staff morale was an unexpected surprise. Staff became excited and enthusiastic. They had a say in everyday procedures. They were empowered. They were already talking about where else they could improve.

Description of Method

My overall project goal was to have Lean used as a Quality Improvement methodology in other health departments, in the NC Center for Public Health Improvement, and in other departments in Beaufort County Government. I planned to demonstrate to our County Manager the benefits of utilizing Lean as a process of eliminating wastes through assessing unneeded (not customer added value) steps in any process using suggestions from frontline staff on Lean Teams trained in Lean. This would be through presenting the results of our Health Department Lean Project from 2009 and also having him be part of a Lean project with one of his direct departments, Inspections, in conjunction with our Environmental Health division. Furthermore I planned to promote Lean by advocating for future funding for additional Lean trainings, and advocating Lean be at least a part of the local public health QI training through the NC Center for Public Health Quality.

Objectives:

1. To pilot Lean QI in our health Department.

I volunteered to be the Lead Health Director for our NENCPPH and volunteered my staff to pilot Lean QI for Public Health. Staff from NC State IES came in advance for one day to observe the health department and learn about our services and how we provided them. Then they came for our four day Kaisen event to train managers and Lean staff and implement the project picked by the team which was to improve our New Family Planning Clinic visit. Kaisen means continuous improvement and works to "perfect" the big picture flow of the current procedures, shown in the "Value Stream Mapping" by cutting out non value added processes. Value added is defined by your customers' wants and needs. Additionally for Lean to be successful it is important for managers to be on board because they need to authorize the team members, not dictate to them. Our Lean team worked sequestered on their project. The Report Out, showing an overview of the entire project and including a "newspaper" of what has been done, what is still pending and suggested dates for completion, was the fourth day.

2. To share our positive results to encourage the other NE NC Partnership for Public Health (NENCPPH) Health Directors to participate in Lean.

I had results and testimonies from my staff on our Lean QI project and along with a couple other members of our NENCPPH Departments who had finished their Lean QI training and had worked on their projects by that time, discussed the positive benefits of Lean QI. I told them, as Health Director I knew it was scary to pull staff from their jobs for four days to do this, but based on our results I assured them the process outcomes were worth it. Joanne Eddy, MSW, our partnership Executive Director was very supportive and encouraging and helped to get the other counties scheduled for their Lean projects. She scheduled each of the health departments' Lean training.

3. To advocate the use of Lean QI in the NC Center for Public Health Quality.

I volunteered my Department to be part of the Pilot QI 101 for the state grant project NC Center for Public Health Quality. My staff on this team included myself and 2 other of our trained Lean team plus 2 staff not familiar with Lean. We were asked to give input to the "pilot" training as to how to structure it for Public Health Departments. Based on our experience with Lean we felt Lean processes should be included. I also spoke with Dr. Steve Cline, Assistant State Health Director who is the recipient of the State QI grant, Joy Reed, RN, PHD with NCDPH who had been working on QI trainings in past years, and Ed Baker, PHD with UNC Institute of Public Health on the benefits of Lean QI.

4. To Promote Lean QI to other health departments in the state and other states.

I spoke of Lean on telephone conferences in SEPHLI where there were participants from 7 other states. I corresponded with the editor of the NACCHO newsletter about our new QI initiative and he invited me to send a write up about it to print. I presented with two staff from IES at our NCPHA meeting in Asheville at a leadership breakout session. Dr. Greg Randolph with the NC Center for Public Health Quality has asked me to present with him in January 2010 at the annual State Health Director meeting on QI in Public Health Departments.

5. To promote Lean QI to our County Manager and County Commissioners as a QI method for other county departments.

We will be implementing Lean in our Environmental Health (EH) and County Inspections Office. They now share a clerical person. EH is under the Health Department and Inspections reports to the County Manager. We need to look for value added to customers and cut out waste in this office. The County Manager is on board with this. After wards I plan to present the benefits resulting from Lean QI resulting to the County Commissioners to suggest using Lean QI in other Departments in County Government.

Results

1. Lean was successfully implemented in a team in the Beaufort County Health Department as the pilot. Industrial Extension Services (IES) staff from NC State University visited our Health Department to get a feel for what we did. They came and did a raining for all our managers and the team members. Then EIS staff met with the team made up of frontline staff and clinic staff mostly. The team had chosen a project to reduce client time in our New Family Planning Clinics. Through the Lean process time was reduced by 50%, from 3 hours to 1.5 hours. Additionally staff became excited and enthusiastic. They determined what process should be cut and restructured and organized in different ways. They became empowered rather than having upper management send down procedures for them to implement. No one was sure about doing this at first. There was concern about being away from their jobs for four days. Managers were not real sure either. I asked my managers to take a leap of faith and go with it. To have Lean work management must buy in and let their front line staff and the others on the team have input to make decisions. Afterwards, everyone bought in and was excited about it. They learned skills that can be continued to be used to make processes easier and of better quality for the customer.

2. Staff from our team wrote individual comments for me to share at the NENCPH meeting about how they felt about the Lean QI experience. The comments were all positive; reduced time, better service, standardized processes and stations, made work easier for staff also. Thus was more pleasant for staff and clients. Some methods carried over to benefit other clinics. They felt it helped them to see a bigger picture of client services, parts other staff deliver and helped them to help each other more efficiently and effectively. We were able to arrange our supplies to reduce our stock and also gave a more efficient way to know when to restock and reorder. Other clinic staff and managers wanted to know when we could do Lean in their clinic. Some staff from 2 other Health Departments and the Health Directors that had done their Lean projects also gave very positive feedback at the Board meeting that also helped encourage counties that had not scheduled yet to do so.
3. I volunteered staff from my Department to participate in the pilot for the NC Center for Public Health Quality. Two of the staff and me who were on this QI team had been trained and participated on our Lean Team. Two others were not familiar with Lean. We were asked to give input and suggestions about this pilot QI training (that had been done previously with hospital settings) and how it could better fit the Health Department setting. We felt many of the tools in Lean QI were more user friendly for Health Department staff, or the way they were presented made them more understandable. The training and implementation done on site working on a project was a much better method to empower staff to understand the need for continuous QI and feel like they had a say in the processes and procedures. The PDSA in the State QI pilot was useful and not brought out in the Lean training.

I invited Joy Reed, RN, PHD with NCDPH to sit in on our county's Lean pilot. She said she was impressed with this method of QI. She has been involved with some QI initiatives and webcasts in previous years for the Health Departments. She is also on our NCNEPPH Board.

Additionally we had a second level Lean QI 200 training for representatives of the ten Health Department teams that had done Lean. We welcomed Dr. Greg Randolph, Amanda Cornett and Dr. Bonnie Zell from CDC in Atlanta to attend this two day session. This session was to help train current Lean Team staff to be facilitators for future Health Department Lean Kaizen events. During this session we all heard unplanned "testimonies" from each county about their experience with Lean. Every county was extremely enthusiastic about how much it helped them make changes and save money and time. Everyone cut out waste and provided more value added service, and some even had monetary savings documented. Everyone was ready to do another project. Dr. Randolph, Amanda and Bonnie

were very impressed with not only with the efficiency, effectiveness and cost saving, but the enthusiasm of all of the staff about a QI process. They planned to meet with the IES staff and their supervisors to see how Lean could fit into the NC Center for Public Health Quality training for Health Departments. They met and hoped to have some of Lean implemented with the program. In addition, a Letter of Intent (LOI) was written by Dr. Randolph in collaboration with UNC researchers and our Partnership for a research grant to get data on Lean as no current research data is available. The plan was to implement Lean QI projects in five of the NENCPPH Departments and two in the State DPH. If the results are positive Lean QI would be listed as a Best Practice, and be part of the State program for continuous QI. We will hear on the LOI November 17th.

On several different occasions I discussed the positive benefits of Lean with Ed Baker from UNC Institute of Public Health and Dr. Steve Cline, Assistant State Health Director, who is overseeing the NC Center for Public Health Quality grant. Dr. Randolph asked for Report Outs from all our Lean projects to use in his QI newsletter. He has also invited me to present with him at the Annual State Health Director's meeting in January 2010 to talk about implementing QI in Local Health Departments.

4. I presented at the Annual North Carolina Public Health Association (NCPHA) meeting in Asheville at a leadership break out session along with the staff from IES, Annah Poteat and Gene Smith. I opened with a history of our Lean QI project pilot in Public Health, how it came about and why it was needed to address the economy, cuts, staffing and services. I shared an overview of benefits of Lean QI from our NENCPPH project. Annah Poteat and Gene Smith with IES presented information on and visuals with slides of; what Lean QI is, how they adapted it to Public Health and then each of the county's projects, and outcomes. They showed slides of the projects and short video clips of staff testimonies discussing the positive impact Lean QI had on them. I closed with why Lean QI should be used in Public Health and how it answers how to make QI continuous and a way for Public Health to do everyday business. That is the Lean culture. Dr. Steve Cline had said during his announcement of the QI grant this past January that continuous QI needs to be how Public Health does business. Additionally, Secretary Lanier said just that morning at the opening session of NCPHA that Public Health needs to learn to work even smarter.

IES staff also made a video of staff from each Lean Team and set up as vendors at NCPHA. The video were testimonies and some results of the projects we had done. I also mentioned Lean QI to the editor of the newsletter for NACCHO and he asked me to write up something for it. I mention Lean QI on conference call with SEPHLI, which includes Public Health employees from 6 other states as well as the

speaker for the call.

5. We will be doing our next Lean QI project in early 2010 in our Environmental/County Inspections Office where they now share a clerical person. This area is having problems and needs to cut out waste in its office procedures. The County Manager is over the County Inspection's Department and is on board with this project. Afterwards I will share the results of this project as well as with the project from our clinical area and NENCPPH departments. My goal is to influence them to implement Lean QI in our other County Departments to cut out waste and save money, resources and provide value added services

My mentor discussed with me how he worked with various different groups to collaborate for the planning and implementation of his project. The collaboration of many stakeholders is important.

Conclusion

Based on the benefits that resulted from implementing Lean QI in our ten NENCPPH health departments, I am convinced that LEAN QI can be an effective tool for a "Culture of Continuous Quality Improvement" and provide a dramatic impact on Public Health and other governmental departments. In current economic times working more efficiently and effectively and saving money is of utmost importance. We must make continuous and incremental changes and improvements. We live in a fast paced global world. Our customers and their perceptions change. We can always improve and find additional ways to cut out wasted efforts and keep in only those processes that are value added for the customer. We cannot keep doing the same thing and expecting better results. Lean looks at "service to the customer" and what is the shortest most efficient way to provide this. Implementing Lean QI can create a Culture of Continuous Improvement and empower staff. Frontline workers have a say in process changes and this not only provides better service but makes their work easier. Staff will become excited and motivated and contribute to continuously helping to cut waste and give value added service. This is a Win-Win for everybody.

Lean QI began in and is used very successfully in manufacturing to save millions of dollars a year. Hopefully future positive research documentation on Lean QI in Public Health will result in the inclusion of Lean QI as part of NC Center for Public Health Quality Improvement Training as a Best Practice. Then perhaps other states will look at Lean QI for their Public Health Departments, or for any government department. Lean QI could have a dramatic positive affect on savings, services and staff morale.

Leadership Development

My goal was to further develop my leadership skills especially in communication, relationships, and by taking a lead role more often. I had discussions with my mentor and other Health Directors. I also had a list of leadership books that were both suggested to me and some I found myself. I think I have grown but, developing leadership skills and continuing to improve is not something that ever ends. Learning and growing is life long. We must continue to grow and improve. Improvement must be a continual process for all employees and that requires continuous learning starting with the leaders.

Some key things I learned: Leadership is influencing others to follow, working with and developing relationships with others. It takes time to build loyalty and instill passion. Think before you speak. Be a good listener. Influence, rather than command. You can't force your ideas on others. They need to think they can give you ideas and you will listen. Do unto others as they would like you to do unto them - understand diversity. What people perceive is what they believe because everyone has a different set of experiences and they view situations from "a different place." Think of the experiences that affected your values and defined you. Leaders discern differences. Be positive and shoot straight and people will work hard for you as they will trust you. Creating positive feelings is the essence of Relationships. As a leader I must further develop employee relationships by nurturing their spirit and making them feel that what they do is significant. Leaders work to focus on bringing out the best in each of their team, want what is best for them, and want them to shine and to discover their self value. There is value in everyone. Success is how well your people are doing. People quit people. Stay in touch with your people. People must be held accountable and carry their load. It is the responsibility of leaders to reward people who work hard/smart and are accountable, and to correctly deal with those that do not hold their own. Doing the right thing is always right.

Resistance comes from not knowing about a change, being comfortable with how things are now and fear of the unknown, and fear of losing control or being overloaded with responsibility. When change is coming, let staff know prior, why, when, what will change and not change and how it will affect them personally. People want ownership of decisions.

Networking and being actively involved in leadership associations makes me a good resource for my staff, and when they network employees learn to appreciate how things are at our Department. I try to actively listen more. I am still working on that. I encouraged managers to delegate more authority and responsibility to their staff. The managers find this difficult to do - to let go and not just do it themselves. They need to trust their staff. This means developing them and giving them the tools they need.

I shared some readings with my managers. I read excerpts from some of these books at our manager meetings (to help with attitudes, perception, team understanding, time management) and suggested they read some of the books and then share what they learned with their own staff. Eat That Frog was actually a book on time management and prioritizing. It is important to spend your energy where it counts rather than be intense in every part of your role. I gave each manager a copy of the book and then asked them to share key points with the other managers and their staff.

Lean has definitely helped to start a culture of looking at our processes and procedures differently. Not looking to find fault in someone, but what we could do to cut out waste, the non value added processes, for the customer and ourselves. Lean gives staff a say in their processes. It trains them to look at the big picture.

We must serve customers (includes staff) uniquely when, where and how they want to be served. Not how we necessarily want to be served. Focus on what our customers care about - their desired outcomes. If the customer does not want your "service or product" it doesn't matter how perfect it is. To improve the lives of employees and employee morale, improve the systems that satisfy customers that deliver organizational outcomes. Focus changes on customer satisfaction first. When you improve things for customers you inevitably improve things inside your workplace. Furthermore, directing attention outward helps avoid petty bickering over non meaningful internal issues. Employees feel good when they make their customers happy.

Improving systems of our organization should be part of what we do every day. (Like using Lean QI as a part of how we do business everyday in Public Health). Find the bigger purpose and vision and let it fuel your team every day. Shared purpose keeps a team together and energized. Have a focused strategic plan that says what the future should look like and what we will do differently to get there. We cannot do everything, but we can do the really important things very well. These are the things that have the most impact on our results. Embrace challenges, be optimistic, be truthful, be more intellectually engaged, caring of others, have positive intensions and humility to become successful at home and work.

Be a team player. Respect for other's unique rolls is needed for a great team. Listen. Seek first to understand, and only then to be understood. Others know things we do not. Negative energy drains you. Negative thoughts lead to negative attitudes, results and self doubt. Positive thoughts lead to increased energy, success and confidence. See the world as full of opportunities and approach life with generosity, truth and compassion. Choose positive energy to overcome obstacles. We learn what we don't want from negative people and events and then we focus our energy on what we do want.

The Buck stops with the leader. You cannot be negative, blame others or avoid

issues and making decisions. Leaders spend more time fixing problems rather than finding someone to blame. You have a choice about how you react to situations. Leaders make more right choices and recover from bad choices quicker. Your attitude about changes impacts changes. Be enthusiastic and positive. Be balanced at work and in your personal life. Going after goals grows us and leads us towards success even if we fail. Continually learn and grow. Give away all that you learn. Communicate with your staff and help them grow professionally and personally. "Fill their buckets" with things that are important to them.

In making presentations leaders are part of their "speech" by; their presence, who they are and what they stand for. What they are passionate about. They speak to inspire or influence. They are confident but not arrogant. Good leaders as speakers should have a message and be able to tell relevant stories and examples. Be a story teller. Stories are vivid images that can inspire. Say something that is different or unexpected" and then support your statement. To be a good speaker, say "I", "you", "us" and "we" to identify with your audience. People tend to like people that are like them. Speak in plain language. Taking a stand is risky and what leaders do all the time. Be yourself, show who you are and show interest in your audience. Listeners ask "WIIFM" what's in it for me. So you need to be able to show how what you are talking about will benefit them.

I presented on Lean at the NCPHA breakout session. I wanted to be sure I remembered to say certain things, so I did not end up applying what I read about being a Leader/Speaker." My mentor was the one who introduced us. Afterwards we talked and he said he thought I probably knew what was in my "notes". I read a lot of it. I did believe in what I was talking about. I told him my mind goes blank when I get nervous. I was nervous about presenting to the leader group. I didn't want to use the power point because one of my books was "Real Leaders Don't Do PowerPoint." The idea was to speak so the audience would key into the speaker and would not be reading the power point slides. A good speaker should be able to make the audience "see" the points in their minds - usually by telling a "story" to illustrate the idea. I need to continue working on my "story telling" part of giving presentations.

I have been more active on committees and in organizations; VP of our Incubator, NENCPH Lead Health Director on Lean project, and part of the State QI pilot giving input for future QI 101 trainings. I have been attending more Health Director Association committees and meetings. I was able to meet and talk to more community leaders and others and this is leading to more communication and collaboration. I will plan to be more proactive in contacting community leaders and setting up times to meet/visit at their locations.

Reviewed by: Jim Chrisman, MPA, Assistant County Manager, Tom Bridges, Health Director Henderson Co., Carol Kinnion, RN, Nursing Director

Appendix I

List of Leadership Books

1. *The Energy Bus* by Jon Gordon, 2007, John Wiley & Sons, Inc.,
2. *Leading With Soul* by Lee G. Bolman and Terrence E. Deal, 2001, Jossey-Bass
3. *Monday Morning Mentoring* by David Cottrell, 2006, Harper Collins Publisher
4. *Monday Morning Leadership for Women* by Valerie Sololosky, 2004, Cornerstone Leadership Institute,
5. *We Don't Make Widgets* by, Ken Miller, 2006, Governing Books,
6. *The 21 Indispensable Qualities of a Leader* by John C. Maxwell, 1999, Nelson Books,
7. *Simple Truth Books* "The Sandbox" , "Eat that Frog", "The Essence of Leadership", A Peacock in the Land of Penguins, Published by Simple Truths,
8. *The Secret, What Great Leaders Know and Do*, Ken Blanchard and Mark Miller, 2004, Barrett-Koehler Publishers
9. *Five Minutes on Mondays*, by Alan Lurie, 2009, Pearson Education, Inc.
10. *Change to Strange*, by Daniel M. Cable, 2007, Wharton Christopher Witt, School Publishing,
11. *Lean for Dummies*, by Natalie J. Sayer, and Bruce Williams, 2007, Wiley Publishing, Inc.
12. *The Tipping Point* by Malcolm Gladwell