

# **LEAN IMPLEMENTATION IN HOME HEALTH CARE**

---

## **LESSONS IN CHANGING THE CULTURE AND IMPROVING SERVICE AT VON CANADA**

Sharon Goodwin

Regional VP Home Care and Private Services, VP Quality and Risk

Lawrence M. Miller, Lean Consultant

VON Canada is the country's largest and oldest home and community based health care service delivery organization. In 2011 it was apparent that poor service delivery to both funders and clients required a major redesign of its care delivery process and a significant change in the culture of VON Canada. The leadership team of VON Canada decided to employ lean methodology to engage their employees in a process of significant change in the system of service delivery and the organizational processes that support service delivery. Results reported by funding agencies (the customer) demonstrate dramatic improvement in satisfaction; time required for scheduling a nurse had dropped from an average of two and half hours to five minutes; productivity has improved by approximately twenty percent; while the satisfaction level of service providers and managers has also improved substantially.

## **BACKGROUND**

In the Canada of the late 1890s, nurses, doctors and hospitals were desperately needed in remote areas and in rapidly growing towns and cities. Lady Ishbel Aberdeen, wife of Canada's then current governor-general, visited Vancouver in 1896. During this visit, she heard vivid accounts of the

## Lean Implementation in Home Health Care

hardship and illness affecting women and children in isolated areas. From this beginning Lady Aberdeen founded the Victorian Order of Nurses.

Today's VON delivers its more than 75 different programs and services through 52 local sites staffed by 4,500 health care workers, and by a dedicated army of 9016 community volunteers. The primary service of VON is providing nursing home health care services and home support services.

Prior to 2004 VON's organization could be characterized as a loose association of relatively independently managed district organizations with their own Boards, fund raising and management. However, with the increasing role of the national government in setting health care policy and funding, with the growing need to employ information technology, and with the recognition that there was a lack of quality control, it was decided to bring more central control and standardization to the service delivery process.

VON's primary home care services in Ontario are funded by local government Community Care Access Centers (CCAC's) that are notified by hospitals and doctors when a patient requires home support or nursing. The local funding agency contacts VON to schedule a nurse who then provides the services and submits a report of service that results in payment to VON.

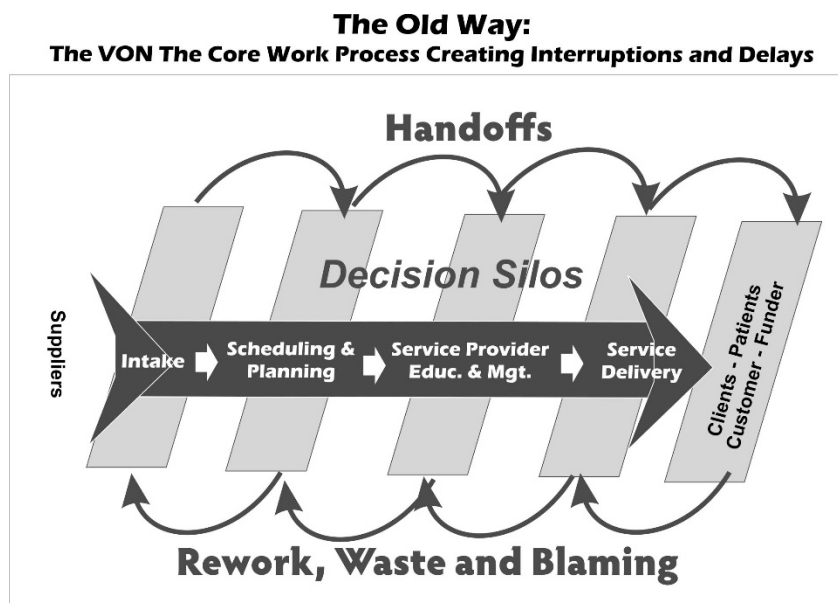
The centralization process included developing organization wide financial, human resource, and information technology processes. It also included the development of centralized planning and scheduling center that required all funders to call into this regional center to initiate the scheduling of nurses. While the management of nurses and home support workers was by local district managers, the scheduling was being done through this regional service center. There were a number of problems associated with this process.

- It denied control and responsibility to the local managers.
- The central planning office was located in London, Ontario. However, they were scheduling nurses over a large geography, all of Ontario, and often were not familiar with that geography, the nurses, or the clients. This resulted in nurses being scheduled with unnecessary travel, poor continuity of service, and frustration on the part of the funding agency case managers.
- Funding agency staffs were often put into a queue when they called into the planning center, never knew which planner they would be

## Lean Implementation in Home Health Care

speaking with, and had to repeat their need or restate their problem several times. When surveyed, 9 of 14 funding agencies expressed dissatisfaction with service, particularly the planning and scheduling function. More than 50% of funding agency staff reported that they were either dissatisfied or very dissatisfied with VON's service in a baseline satisfaction survey. Sixty percent reported dissatisfaction with VON's scheduling function.

- VON's Care and Service Managers reported that they spent half of their time in what they regarded as "waste," time required to fix errors, miscommunications, and rework in the planning and scheduling process. This was time taken away from their primary job of assuring quality of nursing and home care work, training and supporting the nursing staff. This lack of clinical supervision was regarded as creating a significant risk to patient care, dissatisfaction among care providers and frustration by care managers.
- And, although it is a very subjective condition, it is profoundly important that the culture of VON had become very contentious



with a great deal of blaming and fear. For managers, in particular, it was not a happy place to work.

In 2011 the CEO asked Sharon Goodwin, the Vice President of Quality and Risk and Chief Practice Officer, to take on the task of analyzing the Home Care Service Delivery Process and developing a path to improvement. To

## Lean Implementation in Home Health Care

assist her she engaged Lawrence M. Miller, an experienced change agent and lean consultant. Together they conducted interviews, surveyed staff and funders, and developed a path forward. The essential and simple analysis was that the organization was siloed, particularly between the planning and scheduling function connecting nurses to clients/ patients at home and the district management of nurses and communication with funders. It was recommended that the entire process, from beginning to end, had to be radically redesigned. The problem was both the formal arrangement of the work process, but also the social system of organization, communication, decision making and culture.

It was recommended that the initial design involve two districts, Greater Toronto Area (GTA) Nursing and Trenton Home Support. The lessons learned from these pilots would then lead to the design of the remaining districts in the Central Region and then the remainder of the national organization.

## **METHODOLOGY**

There were already improvement initiatives underway at VON utilizing lean problem solving methods. However, these were focused on small improvement and were not looking at the larger system of work and organization. They were seeking small improvements within the existing structure or process of work and organization. Small improvements would never have solved VON's problem. A more revolutionary and holistic approach was required.

Lean management is, in general, the adoption of the Toyota Production System which has proven successful, not only in manufacturing but in increasing numbers of health care settings. (Graban, 2012) (Tousaint, 2013) Books such as *The Toyota Way* (Liker J. K., 2004) and *Toyota Culture* (Liker J. K., 2008) have described the essential elements of lean management. Thedacare (Toussaint, Gerard, & Adams, 2010) and Virginia Mason Medical Center (Kenney, 2011) have provided models of successful implementation in hospital settings. However, there is a difference between hospitals and home care service delivery. Hospitals, like factories, have processes that are in a fixed location, are highly visible and repeatable. In hospitals it is relatively easy to have team meetings, visual display of performance, shared problem solving groups, and for managers to observe and reinforce work practices. Home care nurses and home support workers most frequently

leave from their homes to drive to their client's home, provide services independently, and report the results of their service electronically. Most often, they work alone and without direct supervision. Their individual skill and motivation, their discretionary effort, is a major determinant of their effectiveness. Therefore, the application of lean management at VON required some innovative thinking and design. It also required a dramatic change in the culture of the organization.

### **WHOLE-SYSTEM ARCHITECTURE**

Whole-System Architecture (Miller, 2011) asks that you step back and consider the entire system of the organization and ask fundamental questions. Why do we do this process at all? What are our core work and our core competence? How does this process add value? You consider the *current state* and design the *future state* of both the technical system, the work flow, and the social system that surrounds and enables that work flow. Too many lean implementations are focused solely on the technical system and fail to redesign the social system. The problems in organizations are more likely to be the result of a social system that fails to encourage innovation, teamwork and open dialogue than any particular failure of a work process.

You can think of Whole-System Architecture as “Macro Lean.” And it should generally come before the process of continuous improvement. Whole-System Architecture is based on many years of development of Socio-Technical Systems (STS) (Cherns, 1976) (Trist, 1980) which is both an understanding of the complexity and interdependence of organizational systems; and a process of high participation design – *co-creation*. It first recognizes that both the technical system, the arrangement of equipment and processes are of equal important to the social systems of training, motivation, decision-making, information flow, structure, and communication. STS also recognizes the principles of self-organization that appears in nature and may be considered a “natural” phenomenon. This principle has been applied to health care settings, although in a more theoretical than practical application. (Braithwaite, 2009)

The theory of STS is that performance will be optimized by designing both the social and technical systems together, so that they are aligned. Performance will be sub-optimized if changes in the technical system are not accompanied by corresponding changes in the social systems. Many failures

## Lean Implementation in Home Health Care

in organization change efforts, including the implementation of lean management, result from this failure of alignment.

Traditional methods of implementing lean management are also likely to fail to take into account the potential and influence of information systems and technology. In the Toyota factory you can see the stamping press stamping out the shape of the fenders and bumpers, and you can see the workers installing the dashboard or seats. You can measure the time and motions involved. But, the value adding work in many of our organizations today is less visible and more complex. Complexity theory (Wheatley, 1999) recognizes the rapid, often invisible, interactions between those creating and using information. (Rowe, Volume 51, Issue 4, 2005) It is also an important understanding of the work of health care organizations. (Reddy, 2003) While in the patient's home, a nurse may observe a patient's wound that is not healing as expected. Her decision process at that time is absolutely critical. How her decision process is enabled by current or potential technologies is one of the most important elements of the home care service process. It will be simple if she knows what to do. But, she may be uncertain and her ability to consult with peers on patient care decisions, and in real time when in remote locations may be one of the most important steps in the work process. That ability can be lifesaving. The design process at VON had to take into consideration the non-linear knowledge based interactions that are very different than those common in a manufacturing setting or in a hospital.

### **CO-CREATION: GAINING OWNERSHIP**

VON had lived through a number of previous change efforts. By their own admission they were "terrible" at managing change and implementing improvement projects. One of the primary causes of these failures was the reliance on outside experts to prescribe a solution, hand that solution off to managers and employees, and then witness the inability or lack of motivation to implement those solutions. Whole-System Architectures is based on the idea of "co-creation," that the "world's greatest experts" are on-the-spot and it is their intelligence that must be employed in creating a future state design. The co-creation process involves not only the managers and service delivery staff, but the customers, in this case the funding agency case managers. The more involvement, the more ownership is achieved, and the greater the probability of successful implementation.

## Lean Implementation in Home Health Care

The consultant in this case was very clear about his role: he was to provide a structured process and to facilitate that process, but all analysis and decisions would be made by the two design teams comprised of those who worked in the current system and would be engaged in implementing a new system. The design teams would present their solution to the steering team which was comprised of the senior management team of VON. It was of paramount importance that the design team took complete ownership for the new design, participated in implementation, and were then willing to learn from that implementation and make changes.

The senior management team appointed the design teams and wrote a “Charter” that stated the objectives, the principles, and the boundaries of the design process. There was a design team for the Trenton area home support process; and a design team for one CCAC (Scarborough) in the Greater Toronto Area (GTA). On the design team were two district managers, a manager from the central planning center, two care and service managers who managed nurses and home support workers, two nurses and two home support workers, two administrative personnel from the two sites, and four employees from the central planning center.

The design teams met for three days a week over a twelve week period. Much of their time was spent in the two separate teams, defining the home support and the nursing work flow, but also sharing their design work, and learning from each other. The dynamics of the group changed dramatically from the first week to the last. When they started, the four young women who did planning and scheduling in the central planning center sat in the back of the room and were very quiet. They knew that there had been a lot of anger directed at the planning center and as they reviewed the feedback on the current state they felt guilty and blamed for “the mess.” However, the consultant repeatedly emphasized that “The problem is in the process, not the person. Don’t blame the person, fix the process!” These dynamics would change dramatically.

There was also a disbelief that the senior managers would actually listen to a complete redesign the system that they had created. This fear would prove to be unfounded.

The Process of Whole-System Architecture can generally be divided into four stages of work: *Discover*, *Dream*, *Design*, and *Develop*.

### **STAGE 1: DISCOVER**

## Lean Implementation in Home Health Care

The purpose of the discovery phase is to learn from the current state – both within the organization and from the external environment. An important reality of the discovery by these two design teams was simply the fact that all of the design team members had experienced the frustration of the current system, the anger of customers, and the internal conflict that the system was creating.

- The design teams conducted interviews with the representatives of five different CCAC's to gain their direct and personal input. This was a key step in the design teams gaining confidence. They knew that the CCAC case managers were frustrated and angry at VON. Despite that, they were invited into the room to be interviewed by the entire group of about twenty design team members. The consultant had advised them, based on prior experience that *"It never fails that when you ask your customer to help you improve how you serve them, they are always willing to help."* When the CCAC managers came for their interviews the design team learned that some of them had even worked for VON in the past and had a very sincere desire to see them succeed.
- The design teams reviewed the surveys of both internal managers and external funders.
- The design teams reviewed employee satisfaction surveys of all the groups involved.
- They also compiled and reviewed the key performance data on service visits per day for service providers, missed visits, referral acceptance, and other key measures. These were all graphed so they could see trends and variability.
- The design teams discussed competitive intelligence – how and why competitors were achieving higher levels of customer satisfaction.
- And, most importantly, the design teams spent considerable time mapping and studying their own work processes, the cycle-time through the process, and the quality variances that occur at each step of the process. For each step, they asked whether it was "waste" or "value-adding." From the time a CCAC contacted VON with a request for service, to the time service was completed, there were 176 steps in the process. By mapping the process the design team could see why there was so much frustration and opportunity for errors.



## **STAGE II: DREAM**

Dreaming may sound like it has no place in a work setting. However, spending some time to brainstorm the “ideal state”, the possibility of a dramatically different condition, is often a key phase of significant improvement. It is an opportunity to step outside of the current culture, current technology, and current process, to imagine an ideal future.

The two design teams were organized into five groups to develop the dream of the future state. The teams were:

- Representing the views of the CCAC's and Clients
- Representing the views of a Communication Team representing all of those who transfer information from one person or group to another.
- From the perspective of the home care nursing providers.
- From the perspective of the home support teams.
- And, from the perspective of all of those other groups within VON who support the frontline work of the organization.

The dream included things such as “one person and one number for a CCAC manager to call who can answer and solve problems immediately.” It included forming small client centered Primary Care Teams that would include the person doing scheduling, the care manager, and service providers. These Primary Care Teams would be able to use technology to communicate every day in daily “huddles”, request help from one another, access clinical resources and education, and perform administrative functions such as completing time sheets.

When the dream of the ideal state was compared between what was desired by the funder, the clients, the service providers and the managers, they all essentially imagined the same future ideal state. Now, it just had to be designed.

## **STAGE III: DESIGN**

The change methodology asks the design teams to first design the future ideal flow of the work from beginning to end. Then they design the social system to enable and support that work flow. The two design teams completed their initial work process flow for both home support and for

## Lean Implementation in Home Health Care

nursing. It was understood that these designs would be modified based on any feedback from the Senior Management Team, from consultation with CCAC's, and from gaining more input from additional groups of employees. They will also be modified as they are implemented. In other words, this is a starting point.

The teams then designed the social system. This included the organization of people (team structure), job descriptions and the competencies required for each job, an analysis of the desired decision processes, and proposals regarding the motivation of staff.

While the consultant provided some training in both lean thinking and the Whole-System Architecture process at the beginning, most of his training occurred as each step in the design process was followed and issues were encountered.

### **STAGE IV: DEVELOP**

Once the work flow and the social system had been approved by the Senior Management Team the design teams developed an implementation plan. This implementation planning involved additional members of the organization, particularly from IT, and Human Resources. A project manager was assigned to each site at which the new design was being implemented. These were in addition to the line manager responsible for that site. The project manager role proved invaluable because of all the coordination that was need involving IT/IS functions, human resource changes, and training.

As was expected, following approval from the senior management team, and initial implementation, many lessons were learned and modifications made during the implementation of the process in the remaining districts. At no time was it ever considered a "failure" to learn that the time needed for training for certain positions was inadequate, or that the exact number of people required for different jobs had been underestimated. The design teams and the organization had adopted an attitude of science, an acceptance of experimentation and learning, as an essential aspect of the culture.

### **THE NEW DESIGN**

## Lean Implementation in Home Health Care

There were two presentations to the senior management team: first to present the new work process, the second to present the proposed social systems. How the presentation was done was important. The two teams were to present their designs and include as many members of the teams while making the presentations. The consultant sat in the back of the room and was to only interject if there were questions or concerns for which he was needed. It belonged to the members of the design team.

While practicing and preparing for the presentation several of the members voiced the belief that there was no way that the senior management team would accept their proposal. It was too radical, required too dramatic a change in the way the business was conducted. By the time the presentation was over, the senior management team stood up and applauded the design teams. They accepted the proposed design with virtually no changes.

The significance of this was much greater than the formal acceptance of the proposed solution; rather, it symbolized a new way of managing change and collective learning at VON.

### **VON DESIGN PRINCIPLES**

.We will have a unity of vision and values.

1. Decision making will be transparent and perceived as fair: We will know who makes what decisions and how they are made.
2. We will treat others as we would want to be treated.
3. We will always demonstrate respect for our colleagues, clients and customers.
4. We will enhance individual and team responsibility.
5. We will develop a culture of recognition for good performance.
6. We will become a learning organization by effective listening and the appreciation of diverse points of view.
7. We will develop patterns of behavior, celebration, and unity that are rhythmic and reinforce our cultural values.
8. We will focus on improving processes rather than blaming individuals within the culture.
9. We will make opportunities for learning, development and advancement available on an equitable basis.

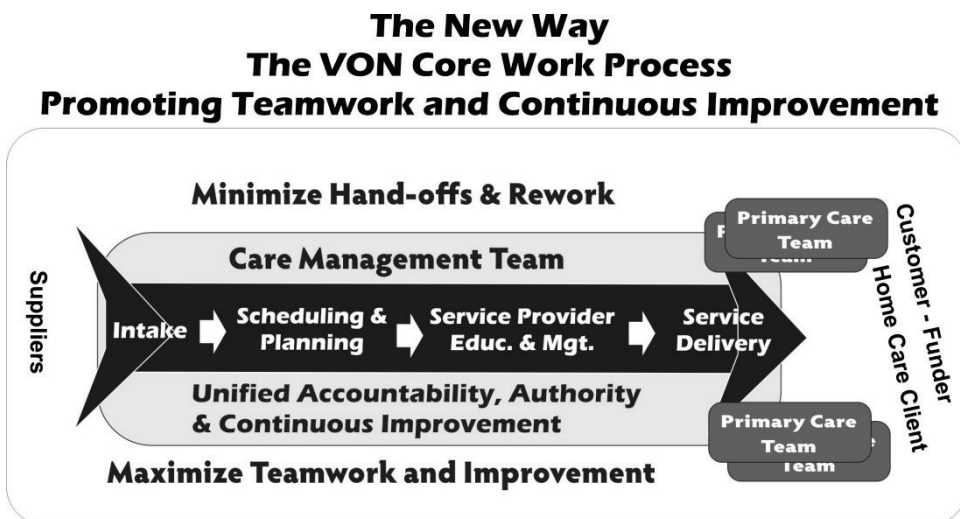
## Lean Implementation in Home Health Care

The principles will be incorporated into our design of systems, structure, skills, style and symbols.

### THE WORK PROCESS

The proposed future work process reduced the number of steps involve from 176 to 58. It eliminated the role of the central planning center (which has now been closed down) and created local planning and scheduling conducted by Client Service Associates who are part of the Care Manager's team who provides service to a CCAC. Along with the nurses or home support workers they form primary car teams responsible for all the service within a relatively small geographic area. These teams are closely aligned with the work of funding agencies and provide for much greater "customer intimacy", personal relationships between all of those working to serve clients who are served.

This graphic loosely illustrates the new work flow in which the Care Management Team takes complete ownership for the quality and efficiency of service delivery. There are no silos and blaming is replaced with continual problem solving and improvement at each level.



The communication process is at the heart of the new design. Every nurse and home support worker now carries a Blackberry. They participate in a morning team huddle to discuss the schedule for that day and to solve any immediate problems, particularly scheduling problems.

## Lean Implementation in Home Health Care

In their report, the design team pointed out that it takes five hours from the CCAC making an offer of service to the scheduling of the first visit by the nurse. They projected that this would take forty-five minutes in the new system. They were wrong. It now takes five minutes!

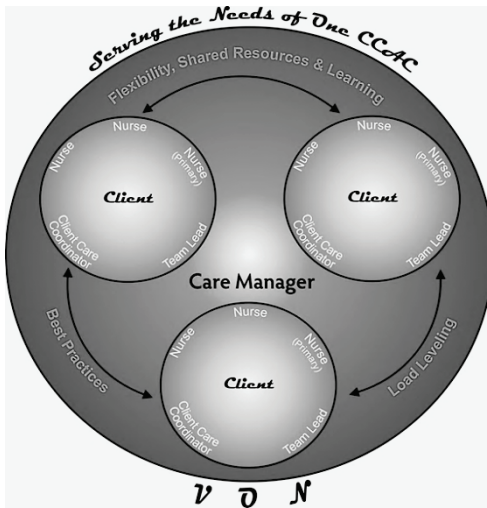
### **THE SOCIAL SYSTEM**

It has been said that “culture eats process for breakfast.” It may be more accurate to state that culture and process are equally dependent and rely upon each other. The design teams recognized that they had to begin designing the elements of the culture with principles in mind. Just as national cultures are grounded in principles such as “freedom of speech, press and religion,” the new VON would have to be grounded in new principles. They agreed on the following principles that would guide their design of the culture:

1. We will have a unity of vision and values.
2. Decision making will be transparent and perceived as fair: We will know who makes what decisions and how they are made.
3. We will treat others as we would want to be treated.
4. We will always demonstrate respect for our colleagues, clients and customers.
5. We will enhance individual and team responsibility.
6. We will develop a culture of recognition for good performance.
7. We will become a learning organization by effective listening and the appreciation of diverse points of view.
8. We will develop patterns of behavior, celebration, and unity that are rhythmic and reinforce our cultural values.
9. We will focus on improving processes rather than blaming individuals within the culture.
10. We will make opportunities for learning, development and advancement available on an equitable basis.

People were organized around the new process into, both at the primary care team level and the management levels. The following two diagrams are the new organization structure. Most readers may at first be

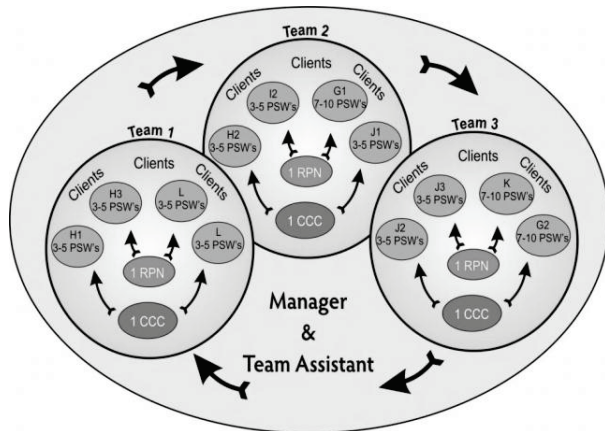
## Lean Implementation in Home Health Care



confused. These don't look like "normal" graphical representations of organization structure, with the senior person in a box at top, straight lines leading to more individual boxes of subordinates, etc. There are no squares, only circles, which symbolically represent the wholeness of jobs, the unity of teams and their responsibility, and the sharing of ownership and responsibility. Each circle is a primary care team and the larger circle is the larger team

serving one CCAC and their clients. The individual, the Client Service Associate, who does the scheduling, is a member of the primary care team. The design teams computed exactly how many service providers were needed in each geographic area. In the case of home support workers, an RPN serves as the team lead and can provide health care advice and coordinate with other health care professionals when needed.

The design team also proposed larger larger circles that would encompass all of the CCAC's served in the GTA, for example, and how corporate services such as human resources, finance and information systems would work with these teams. They were illustrated with overlapping circles intended to illustrate the breakdown of walls, the fluid flow of information between groups, which was not previously the case. The organizational principle illustrated in these diagrams is one of flexibility and fluidity, rather than rigidity. It is an attempt to adapt to the realities of the natural environment.



## Lean Implementation in Home Health Care

The design team did a lot of working identifying all of the specific competencies required of each position in their design. They also wrote job descriptions and defined the decision making process.

Decision-making is particularly important in the culture of any organization. Who will be involved in which decisions? And will these decisions be made in a *command*, *consultative* or *consensus* style? This was developed for each position. Here is an example of the decision matrix for nurses who are members of primary care teams.

In addition, the design teams analyzed the flow of information and identified exactly what types of information would be provided to individuals and to teams; where that information would come from; and how it would be delivered.

They also identified possible forms of reward and recognition that would be provided to teams as they improved their performance. Eight key measures of performance were agreed to and each team now tracks these on a weekly basis.

Following the approval of the design by the senior management team a detailed implementation plan was developed and implementation teams were assigned. The District Executive Director in each district and the Care and Service Manager for each area had key responsibility for implementation. They had all served on the design teams and fully understood both the details and the intent of the design. A project manager was also assigned to assist in coordinating efforts, particularly across the boundaries of the operating groups and the corporate staff groups.

The implementation plan included moving from the design phase to a phase of continuous improvement. This phase included the assignment of internal coaches to each team and following a development process laid out in the consultant's team manual (Miller, 2012) which was customized for as the *VON Home Care Team Guide*.

Below are two of the competency models developed by the design team for primary care team members and team leads.

## Lean Implementation in Home Health Care

<b>TEAM MEMBER COMPETENCY CHART – ALL MEMBERS</b>		
<b>Priority</b>	<b>Technical Skills</b>	<b>People Skills</b>
A. Required for Team Membership	Computer skills – i.e. email, sending attachments, saving files, searching for files Telephone and email etiquette Self reflection CCAC report requirements CCAC data – what they are, how to read them Basic understanding of medical terminologies Work processes Continuous improvement	Customer/client service Team dynamics and roles Effective communication Cultural awareness
B. All Members Should Work Toward Developing		Conflict resolution Facilitation skills Cultural sensitivity
C. Most Member Should Develop These Skills		
D. Some Members Should Develop		
E. Would be Beneficial but Not Necessary		Diverse language skills



## Lean Implementation in Home Health Care

<b>TEAM MEMBER COMPETENCY CHART – TEAM LEAD –</b>		
<b>ALL ABOVE PLUS BELOW:</b>		
<b>Priority</b>	<b>Technical Skills</b>	<b>People Skills</b>
A. Required for Team Membership	Understand CCAC contracts Working knowledge of team dynamics RN designation Use and action data Scheduling principles Clinical experience Collective agreement	Desire to be Team lead (motivation/initiative) Know when to escalate to management Advanced customer/client service, conflict resolution, problem solving and communication skills
A. All Members Should Work Toward Developing		
B. Most Member Should Develop These Skills		
C. Some Members Should Develop		
D. Would be Beneficial but Not Necessary		

## **DECISION-MAKING WORKSHEET - NURSES**

### **COMMAND DECISIONS**

Command decisions are those decisions that are made by one individual with authority on the spot. Best when the priority is speed and conformity to the decision such as in a fire drill or crisis mode.

1. Clinical care decisions – within scope of practice
2. Reporting to CCAC
3. Identifying and reporting Risk
4. Case load planning and visit schedule
5. Delegation of care to unregulated caregiver
6. Assessing appropriate level of service provider

### **CONSULTATIVE DECISIONS**

Those controlled by one person who consults with others who have knowledge or who must be committed to the decision. Use when time is important and when the decision is not sufficiently important to justify an entire team meeting.

1. Assignment of new referrals
2. Coaching/mentoring
3. Workload
4. Team huddles

### **CONSENSUS DECISIONS**

Decisions made by the entire team as a group. Use for those decisions that are important to all team members, need the commitment of entire team, and provide important learning for team members.

1. Schedule – goal of team member is to reach consensus. In the absence of consensus the team lead will make a consultative decision with the nurses – if that fails the decision will be made by the manager
2. Quality feedback – what to do as a team to improve
3. Unplanned absent coverage

### **OUTCOMES**

There are both objective and subjective outcomes of this process. There is an outcome that might be overlooked in the desire for empirical proof of the validity of the new design. And, that outcome has to do with the psychology and development of human potential. You will remember the four young women from the planning center. One of them, the youngest was there by accident. A planner who had been selected and scheduled to be on the design team became ill and a quick replacement had to be found. This young woman, Brandi, was simply available. Who is available is usually a terrible selection criterion for a design team member. But, there she was – confused, intimidated, and for the first several weeks contributed little. To be perfectly honest, when this author spoke to her, she spoke in a rather adolescent voice and with that adolescent sarcasm that made one question whether she would make any useful contribution. But, the process of involvement, empowerment, co-creation, transforms people – or, at least the perception of people. By the time the design work was completed Brandi and the other three were all facilitating break out groups, making presentations and demonstrating the essential value of their knowledge of the scheduling process and the workings of the software that was used and would be used in the new design. In a few months Brandi became an extremely effective team leader of the team of GTA Client Service Associates. She was leading meetings, developing standard work, training new Associates, and tracking performance data. She was a new person. The other three young women all became trainers and coaches of the Client Service Associates in all of the subsequent Districts as the design was rolled out to the other Districts. By traditional thinking, one might have asked “what can they contribute to the redesign of the organization and culture” because of their low rank and inexperience. In fact, they each became true heroines of the new design. They were easily among the most important players in the process.

The other subjective outcome of this process is the dramatic change in the general culture of problem solving and decision-making in the organization. In the past there was a high level of distrust and blaming. Today, there are regular team meetings in which the focus is on the data, the key measures of performance, and the processes that result in that performance. Each Friday morning there are regular, and virtual, team meetings that cut across District boundaries and the boundaries of operations and staff groups, to review the lessons learned from the

implementation of the designs. From these meetings dozens of improvements have emerged and shared lessons that have enhanced the speed of implementation.

### **CUSTOMER SATISFACTION:**

On the following pages are charts of overall satisfaction on the part of the funding agency's managers and case managers for the first two implementations. The follow up survey was completed about six months after the implementation and improvements have been made since that time. Additionally, the process has been rolled out to the other sites and they have experienced similar improvements in customer satisfaction.

It is interesting that the survey question that scored the highest in the pre-design survey was one that asked "How would you rate the level of service delivery by VON care providers?" While there were no changes in the actual skills of the service providers, they rated their satisfaction as considerably higher: Sixty percent were somewhat to very satisfied before; ninety-two percent were somewhat to very satisfied in the post implementation survey.

In the following charts, it may be hard to read the options, but the first two columns two the left are "Very Dissatisfied" and "Somewhat Dissatisfied." You will see in the Trenton Home Support survey before implementation more than fifty percent of the respondents were either very or somewhat dissatisfied with the level of service they were receiving from VON. Six months after implementation no respondents reported being either very or somewhat dissatisfied. In the pre-survey none reported being "Very Satisfied" and in the post survey 40% reported being very satisfied with the level of service.

In the Greater Toronto Area the funding agencies rated their level of dissatisfaction equally, with more than fifty-percent responding that they were either Very Dissatisfied or Somewhat Dissatisfied. In the post redesign implementation survey, also administered about six months after implementation, only eighteen percent reported being very or somewhat dissatisfied.

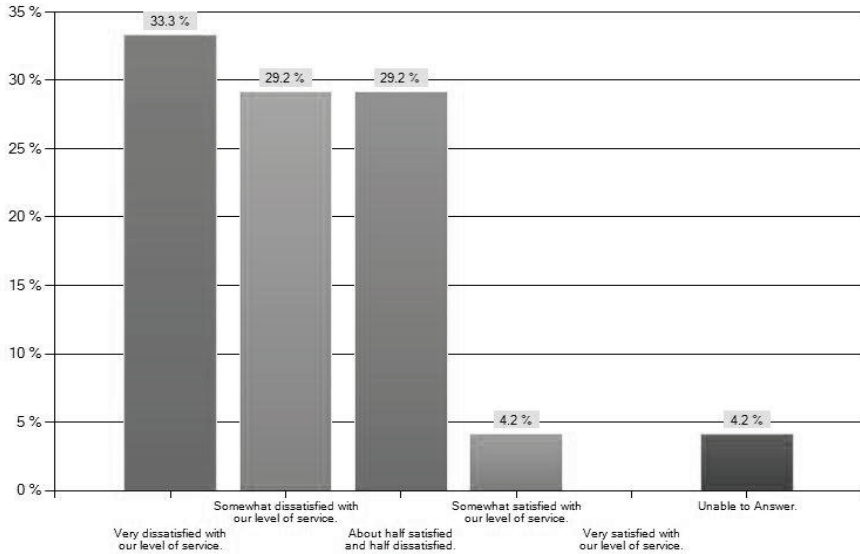
In conversations with VON managers and funding agency managers it was generally agreed that this dramatic improvement had saved major contracts from cancellation. The key factors that resulted in the change in

## Lean Implementation in Home Health Care

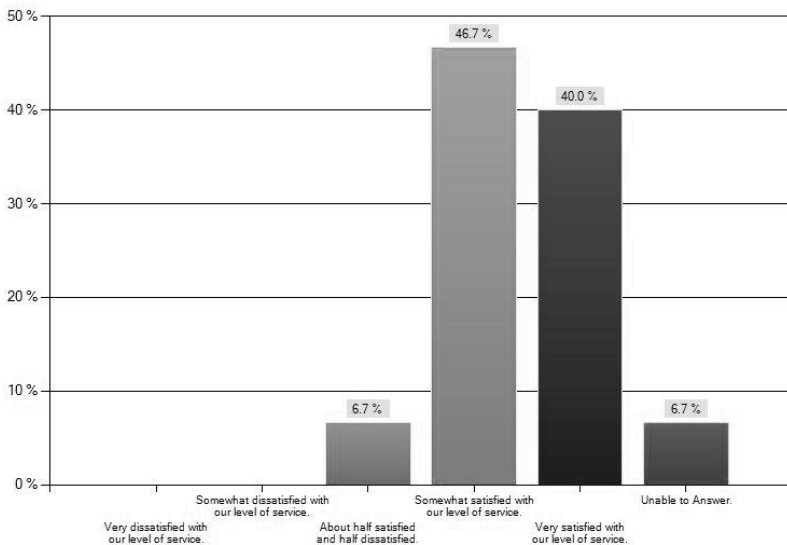
their satisfaction levels was the ability to communicate quickly and easily, to have problems solved by a knowledgeable person, and to have a consistent point of contact. In addition, the key performance indicators of a) referral acceptance, b) missed visits, and c) continuity of service providers all improved as well.

## TRENTON HOME SUPPORT CCAC OVERALL SATISFACTION BEFORE AND AFTER REDESIGN

From your personal experience, how would you rate your satisfaction with the service that VON has provided over the past year?

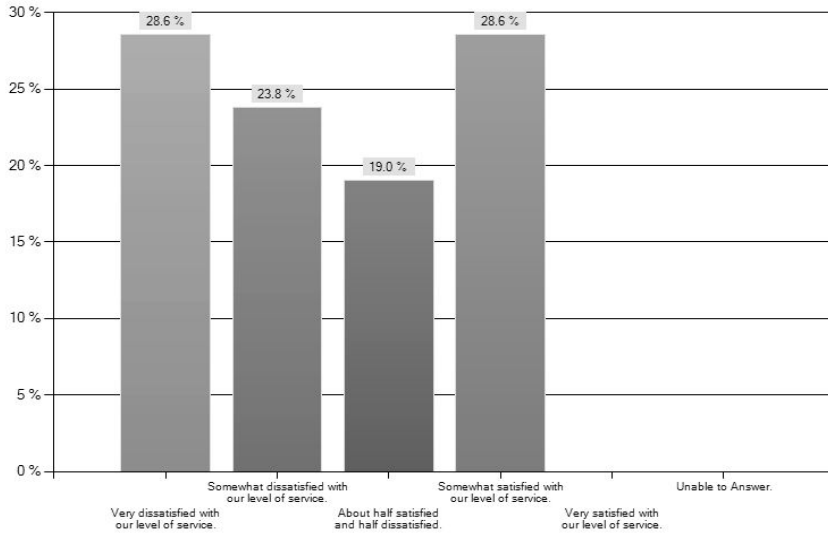


From your personal experience, how would you rate your satisfaction with the service that VON is currently providing?

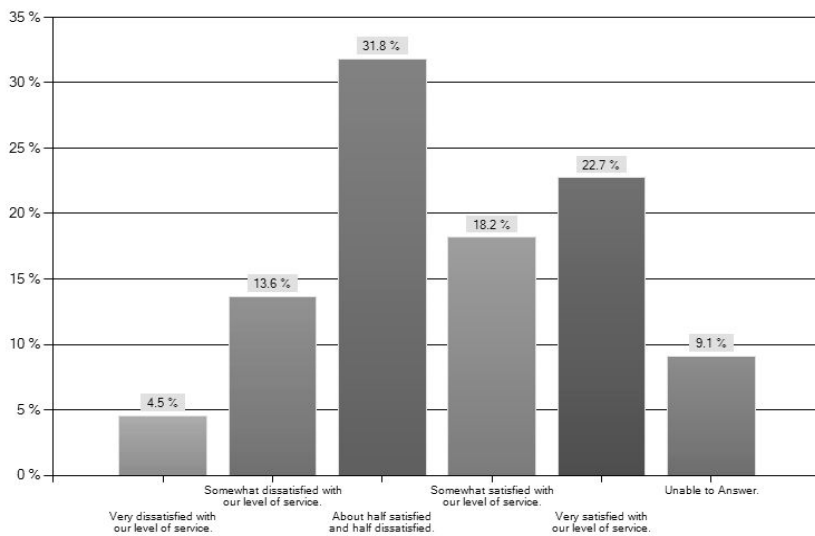


## GTA CCAC OVERALL FUNDER SATISFACTION BEFORE AND AFTER REDESIGN

From your personal experience, how would you rate your satisfaction with the service that VON is providing?



From your personal experience, how would you rate your satisfaction with the service that VON has provided over the past two months?



## PRODUCTIVITY OF SERVICE PROVIDERS

From an internal organization standpoint the most critical number that impacts financial performance is the number of visits made per day or week by service providers. This measure is expressed as “visits per FTE” (full time equivalents). In all cases these measures have improved. The reason for this is primarily the effect of the primary care teams who on their morning huddles every day discuss their service levels, their targets, and who can handle additional visits. The team now knows exactly what their level of productivity is, as well as missed visits, referral acceptance and other KPI’s. The Client Service Associate is no part of that team and is intimately familiar with their schedules and is in frequent communication with the funders. This intimacy and transparency and teamwork has resulted in across the board increases in productivity and significant improvement in the financial performance of the organization.

This case study is being written only one year after the first two pilot sites were implemented. Many of the sites have been in implementation less than six months. The following table presents the improvements in productivity in both the nursing and home support programs.

<b>Productivity Changes: Visits per FTE</b>		
	<b>Nursing Programs</b>	<b>Home Support Programs</b>
<b>All Districts Implemented for Six to Twelve Months</b>	<b>+25%</b>	<b>+13%</b>

## POST-SCRIPT AND IMPLICATIONS

Now that the redesigned process and organizational system have been implemented throughout all of the Central Region of VON Canada the improvement process is in a new phase, going from revolutionary to evolutionary improvement. There have probably been a hundred small improvements made in how the design has been implemented across the



## Lean Implementation in Home Health Care

Districts. But some of the learning is now becoming the standard way things are done at VON.

VON is now standardizing the redesigned work processes. They are also developing Standard Work and Leader Standard Work for each position. By developing standard work they understand that this does not mean to make these jobs rigid. It simply means “here is what we know from our experience, so let’s keep doing it” until someone decides to conduct an additional experiment and find improvements.

One often expects resistance to change when you are changing almost everything about how jobs are done, how decisions are made, and the culture of the organization. And, while some individuals resisted change at VON, that resistance was minimal, almost unnoticed. The reason for the lack of resistance was the use of a design process that was genuinely one of co-creation that trusted the expertise of those who do the work. Each site took the original redesign documents and then did their own design, modifying and customizing to their realities. There was also little resistance because it did become the accepted norm that there would be no blame or punishment of individuals, but rather we would all focus on how to improve the process... continuously. That relieved a great deal of fear that had been present in the organization.

This case provides a general model of how successful change can be achieved in a dispersed and complex health care organization where there is little immediate supervision. It illustrates both the successful application of lean thinking and the Whole-System or socio-technical model of change.

## **BIBLIOGRAPHY**

- Braithwaite, J. R. (2009). Towards safer, better healthcare: harnessing the natural properties of complex sociotechnical systems. *Quality and Safety Health Care*, 18: 37-41.
- Cherns, A. (1976). The principles of sociotechnical design. *Human Relations*, 29(8), 783-792.
- Cherns, A. (29(8)). The principles of sociotechnical design. *Human Relations*, 783-792.
- Kehoe, M. A. (2012). *Complexity Theory and Nursing: Explanation and Application*. Oneonta, NY: Holistic Health and Healing (blog).

## Lean Implementation in Home Health Care

- Kenney, C. (2011). *Transforming Health Care*. Boca Raton: CRC Press.
- Liker, J. K. (2004). *The Toyota Way*. New York: McGraw Hill.
- Miller, L. M. (2011). *Lean Culture - The Leader's Guide*. Annapolis, MD: Miller Management Press, LLC.
- Miller, L. M. (2012). *HealthCare Lean*. Annapolis, MD: Miller Management Press, LLC.
- Reddy, M. P. (2003). Sociotechnical Requirements Analysis for Clinical Systems. *Methods of Information in Medicine*, 437-44.
- Rowe, A. a. (Volume 51, Issue 4, 2005). Use of complex adaptive systems metaphor to achieve professional and organizational change. *Journal of Advanced Nursing*, 395-405.
- Tousaint, J. S. (2013, January). The Promise of Lean in Health Care. *Mayo Clinic Proceeding*, pp. 88(1):74-82.
- Toussaint, J., Gerard, R. A., & Adams, E. (2010). *On the Mend*. Cambridge, MA: Lean Enterprise Institute.
- Trist, E. (1980). The Evolution of Socio-Technical Systems. *Perspectives on Organizational Design and Behavior*.
- Wheatley, M. (1999). *Leadership and the New Science*. San Francisco: Berrett-Koehler.