Leadership in Health Services

Lean leadership: an ethnographic study

Kjeld Harald Aij Merel Visse Guy A.M. Widdershoven

Lean leadership: an ethnographic study

Kjeld Harald Aij
Department of Anaesthesiology & Operative Care, VU University Medical Center, Amsterdam, The Netherlands
Merel Visse
Ethics of Care, University of Humanistic Studies, Utrecht, The Netherlands, and
Guy A.M. Widdershoven
Department of Medical Humanities, VU University, Amsterdam, The Netherlands

Received 24 March 2014
Revised 25 June 2014
28 June 2014
Accepted 4 July 2014

Abstract

Purpose – The purpose of this study is to provide a critical analysis of contemporary Lean leadership in the context of a healthcare practice. The Lean leadership model supports professionals with a leading role in implementing Lean. This article presents a case study focusing specifically on leadership behaviours and issues that were experienced, observed and reported in a Dutch university medical centre.

Design/methodology/approach – This ethnographic case study provides auto-ethnographic accounts based on experiences, participant observation, interviews and document analysis.

Findings – Characteristics of Lean leadership were identified to establish an understanding of how to achieve successful Lean transformation. This study emphasizes the importance for Lean leaders to go to the gemba, to see the situation for one's own self, empower health-care employees and be modest. All of these are critical attributes in defining the Lean leadership mindset.

Originality/value – In this case study, Lean leadership is specifically related to healthcare, but certain common leadership characteristics are relevant across all fields. This article shows the value of an auto-ethnographic view on management learning for the analysis of Lean leadership. The knowledge acquired through this research is based on the first author's experiences in fulfilling his role as a health-care leader. This may help the reader examining his/her own role and reflecting on what matters most in the field of Lean leadership.

Keywords Hospitals, Health leadership competencies, Management, Learning, Transformational leadership

Paper type Case study

Introduction

In recent years, there has been an increase in the use of Lean principles and methods – the concept of improving value and reducing waste – in the health-care sector, as means of improving care processes. The clinical practice literature suggests that this has been a positive experience (Graban, 2011; de Bucourt *et al.*, 2012; Brown and Duthe, 2009;

This study was supported by LIDZ, a Dutch network for Lean healthcare, and the authors acknowledge the support of Emedits Global Ltd (Steven Bradshaw) for the editing of proper English of this manuscript.

Leadership in Health Services
Vol. 28 No. 2, 2015
pp. 119-134

1751-1879
DOI 10.1108/LHS-03-2014-0015

Melanson *et al.*, 2009; Rutledge *et al.*, 2010); however, several authors have argued that Lean only makes a lasting contribution if its use enhances the problem-solving abilities of health-care professionals, teams and, ultimately, entire institutions, and that leadership is essential in accomplishing this lasting contribution (Mann, 2009; Simon and Canacari, 2012; Morrow *et al.*, 2012; Davis and Adams, 2012; Baird *et al.*, 2011; Dombrowski and Mielke, 2013).

This article uses ethnographic research to show how the first author, Head of Anaesthesiology and Surgical Care at a large Dutch teaching hospital, spent his first two years on the job putting theory into practice or, in other words, moving from Lean knowledge to an improved culture. The implementation of Lean in an organization requires behavioural change, which, in turn, demands leadership qualities and the ability to make sustainable change (Keiser, 2012; Mann, 2012); an improvement culture is part of this behavioural change (Dombrowski and Mielke, 2013). Focusing on the processes and experiences in the work environment and applying the underlying theory to reinforce the lessons learned involves reflection on one of Lean's important basic principles: going to the *gemba*. That is, improvements should be based upon practical experience in the *gemba*, the place where the product or service becomes of value to the customer (Mazur, 2003) or, in health-care terms, the patient. Going to the *gemba* means that "Lean leaders should go to the shop floor frequently to truly understand the processes and to make the right decisions" (Dombrowski and Mielke, 2013). This corresponds with the theories of organization, which state that to understand activities of organizing, we must immerse ourselves in work-floor processes and be present on the work floor (Ybema *et al.*, 2009; Weick and Browning, 1986). One useful way to study work practices is ethnographically (Ybema *et al.*, 2009) because it provides an insider's point of view (Ellis and Bochner, 2000; Boyle and Parry, 2007).

Lean does not provide a template for leadership, and no studies relate findings to a Lean leadership model. However, Mann (2012) presents a useful Lean management system that supports successful implementation of Lean and its sustainability. The identification of leadership attitudes and behaviours that serve leaders in this practice setting will help them support their colleagues' personal growth and sense of value. The aim of this study was to identify and define leadership requirements and traits that are important in supporting organizations through Lean transformation.

Background

Defining Lean

Womack first coined the term "Lean production" to describe the manufacturing philosophy used in the 1980s by the Japanese automobile manufacturer Toyota (Womack and Jones, 2003). At its heart is the idea of creating maximum value for the client and a minimum of waste using the fewest possible resources (Simon and Canacari, 2012).

However, experience has shown that focusing solely on the implementation of Lean tools without also bringing about a change in the organizational culture rarely, if ever, results in true and lasting improvement (Mann, 2009; Simon and Canacari, 2012; Morrow *et al.*, 2012; Davis and Adams, 2012; Baird *et al.*, 2011; Dombrowski and Mielke, 2013). Liker (2008) cautions that the Lean tools and techniques of the Toyota production system do not hold the key to Toyota's success; instead, Toyota's success is based upon its ability to maintain a learning organization through the cultivation of leadership, teams and culture, diverse strategy and supplier relationships (Liker, 2008).

The successful implementation of Lean is dependent on context and situation (Papadopoulou and Özbayrak, 2005). Lean is about more than merely introducing measures to reduce waste, improve efficiency and standardize processes. In fact, their implementation accounts for only 20 per cent of the effort needed to achieve a Lean transformation. The remaining 80 per cent is effort made by managers of change (Mann, 2009), who face the challenge of altering the mindset of leaders and employees (Dombrowski and Mielke, 2013). Effective Lean leadership is also essential for Lean transformation to be effective over the long-term (Dombrowski and Mielke, 2013; Mann, 2012; Keiser, 2012).

Current theory on Lean leadership for change

Leadership can be defined as the process by which one person sets the purpose or direction for one or more other persons and helps them to proceed competently and with full commitment (Jaques and Clement, 1991). The differences between leaders are huge, and the similarities are usually too general to allow for conclusions. Quite simply, leadership cannot be reduced to a simple formula. In addition, there is no common route to good leadership: studies lack clear evidence of any particular consistent personality qualities of great leaders (Jaques and Clement, 1991).

Leadership is especially important when organizations experience change, which is inevitable when implementing Lean. Ongoing process changes, as part of continuous improvement, are generally incremental and not seen as transformative in themselves. However, Lean introduces large or transformative changes when elements of an organization change; this, in turn, requires a change in leadership and culture, the latter being difficult to achieve and sustain (Mann, 2012; Keiser, 2012).

Organizational transformation offers a paradox: no significant change occurs unless the top (management) drives it, and no significant change occurs if the top (management) drives it. This becomes even more problematic if one takes into account, with Senge (1996) and Schein (2010), that three levels of leaders (executive, network and line) and three cultures (operator, engineering and executive) are required to communicate, accept and understand each other and collaborate to effect change. Daft and Armstrong (2009) suggest that leadership for change requires leaders with the appropriate personal qualities, skills and methods but do not specify what these are. Jaques and Clement (1991) define leadership as a function of responsibility associated with a role, such as a manager's, and suggest that good leadership relies on competence in role rather than a generic aptitude for leadership. Thus, there is no consensus as to what specific leadership styles and competencies are important for change.

However, there is a close correlation between leadership actions for Lean transformation and for generic transformative change (Aij *et al.*, 2013); the crucial element required for effectiveness of leadership is overall competence. Mann (2009, 2012) contends that a Lean management system is required for the successful and sustainable implementation of Lean. Within the proposed Lean management system, Mann (2012) identifies four principal elements:

(1) leader standard work;
(2) visual controls;
(3) daily accountability; and
(4) leadership discipline.

Here the management system is structured by providing guidelines to itemize a leader's work into a daily routine with suggested frequencies and durations for leader activities such as daily start-up meetings, production checks on the floor, review of trend charts, continuous-improvement meetings, process monitoring, process auditing and floor time. Visual controls are emphasized as fundamental for process performance tracking and assessment. Similarly, the daily accountability process uses a visual system for exposing problems and ensuring that problems are solved. This ultimately serves as a driver of continuous improvement and as an aid for the leader's discipline (Mann, 2012). Recognizing the importance of leadership in Lean and Lean implementation, Mann (2012) emphasizes the role of leadership as a process within Lean and provided a framework for leaders. Mann supports the view that an organization's culture is a product of its management system. He argues for the absolute need for a Lean management system with explicit definitions of leaders' roles, work processes and schedules. Such a management system will produce and support a Lean culture with the same level of standardization and discipline (Mann, 2012).

Methods

Setting

This study was conducted at the VU University Medical Center (VUmc), a 733-bed academic hospital in Amsterdam, The Netherlands. The Dutch Institute for Accreditation in Healthcare (NIAZ) accredited VUmc, following an external audit in 2010. Subsequently, VUmc adopted Lean as a tool for continuous improvement. During the pilot phase, Lean was implemented in two surgical wards and the operating theatre at VUmc and an affiliated outpatient psychiatry clinic. Between 2010 and 2014, Lean became a core strategic programme at VUmc.

Qualitative data collection

A qualitative, ethnographic approach was used. Ethnography studies the everyday experiences of people and makes us more aware and understanding of the social processes within organizations (Ybema *et al.*, 2009). This research is based on the personal experiences of the author (auto-ethnography) and interviews to collect observations and insights from other health-care leaders. "Auto-ethnography is a highly personalized account that draws upon the experiences of the researcher for the purposes of extending sociological understanding" (Sparkes, 2000, p. 21). Data collection from auto-ethnographic narratives has been validated (Ellis and Bochner, 2000; Boyle and Parry, 2007).

Interviews

In total, six in-depth interviews were conducted: these were with three team leaders (representing the departments of cardiology, oncology and nephrology), the Lean programme manager, the operating theatre manager and the medical head of the orthopedic surgery department. These persons represent the range of organizational hierarchy involved with Lean at VUmc, and so, a range of experiences, opinions, motivations and interpretations could be collected. A short and semi-structured topic guide was used that focused on the traits/competencies of Lean leadership in different situations, as observed by the interviewees. Such a technique has been previously validated for collecting data in organizations (Ehigie and Ehigie, 2005). Established

interviewer techniques were used to obtain deep and meaningful insights in terms of interviewee motivation and insight (Garb *et al.*, 2002; Bell and Bryman, 2007).

Observations

Observation data were recorded by KHA by making notes about important events reported by interviewees. The events and statements recorded were then cross-checked against other sources such as official organization documents, meeting minutes, organizational memos and newsletters to identify and match other details. However, in some cases, they were based solely on participants' memories. To prevent validity issues and to enhance the trustworthiness of this research, we tried to match these memories with information from other documents and shared our notes with other colleagues to comment, offer interpretations and identify areas needing clarification. We used selected input from others, but in this paper, we have not included specific responses or reactions to the research, so readers' perceptions are not unduly influenced.

Analysis

Analyses focused on identifying consistent themes in terms of excerpts, quotations or passages from records, official reports and surveys. This approach, based on ground theory, is known to increase the level of accuracy and reliability of qualitative research (Labuschagne, 2003). Our study involved the analysis of memos, emails, strategy deployment documents and Lean training documentation. This method proved useful, an example being to validate differences in opinion between leaders and less senior staff members.

Results

We found three common characteristics of importance for Lean transformation, that is going to the *gemba*, employee empowerment and modesty. To illustrate these findings, reflexive accounts are presented for each characteristic, along with supportive interviewee responses, where appropriate.

Going to the gemba

First author's auto-ethnographic vignette (recorded at around one year)

> When I wanted to start with Lean at VUmc, I choose a project-based approach and I scheduled a couple of Lean training sessions. The idea was that I launched the plan and my employees would report their progress. Quickly, I rejected that idea. There was a big gap between how I thought it would be and what I heard from my employees. I thought that there would be daily measurement of performance indicators, which would be visually managed on the work floor. In fact, only two managers had actually implemented Lean and some visual management boards were still unused.
>
> My Lean coach advised me to spend time on the work floor. During the early months I did this on a weekly basis. I walked around for 1–1.5 hours in the different departments of the operating theatre and I noted things that caught my attention (e.g. damaged equipment, staff rummaging for items, distracting noise from machinery). With help from my Lean coach I concluded that it was impossible to improve things by myself. I needed to get everyone more committed.
>
> I spent 8 hours per week on the work floor. I became more targeted. It was not useful to walk the same round over and over again. It seemed better to work with themes. Our hospital had already defined patient safety themes. This resulted in theme routines, such as checks on fire

safety. During those checks, I asked questions. What are the procedures? Does everyone know them? How do we know when a fire extinguisher is still working?

To convince my manager of the benefits of Lean, I needed to change my own way of seeing and thinking. To reduce resistance among my employees I spent time on the work floor and took the lead during improvement meetings. Later I included my employees more in the Lean process, by setting the example. I showed that I wanted to discover the solutions to problems with help from my colleagues. Those conversations were not always easy. Sometimes people were willing to talk, but sometimes they were too busy. I learned that I could easily walk with them during their tasks without interfering with the primary process. Employees perceived my walking with them as a way of me controlling their job and they were not used to that. It took time to build trust for the approach.

(Note: the author's learning experience of going to the *gemba* took around four months in total.)

In Japanese, *genba* – or the more commonly used word *gemba* – means "actual place". In the Lean context, it refers to the place where value is actually created (Fine *et al.*, 2009). Lean focuses on being on the work floor and seeing the problems for one's self. The majority of study respondents confirmed this. This first-hand experience supports leaders to determine areas for improvement. To some extent, this study found that the leadership team increased their work floor visits, which allowed them to discover problems and to find many points for improvement. For example, the operating theatre nurses discussed and implemented, with the team leader, many improvements that helped in decreasing the time taken to locate equipment in storage rooms.

Every manager interviewed stated that they spent almost all his/her time on the work floor, apart for the time needed for meetings, emails, trips and phone calls. Generally, going to the *gemba* was viewed positively (Table I). Managers mentioned that they were able to solve problems more quickly, as well as achieving increased alignment of goals and, more importantly, becoming part of the *gemba* itself. Usually, managers find themselves focusing upon measures and indicators, whereas being in the *gemba* actually makes them *experience* what is going on. The auto-ethnographic vignette presented above illustrates this, as well as other respondent accounts: "The manager will see problems with his own eyes […]". This may create a shared understanding between managers and employees of what the problem is and the possibility to exchange their perspectives on the best solutions. Going to the *gemba*, thus, not only supports quick solutions, but fosters mutual understanding between "critical players" (study respondent).

Respondents reported on objections against going to the *gemba* as well (Table I). Several managers commented on the lack of necessity to "talk about the same issues all over again" (study respondent) and experienced being short of time. Others believed that "their" people do not need their input. Finally, there are managers who had access to sufficient information. These managers did not explicitly address relational dimensions of their work, creating support and commitment through, for example, eliciting the perspectives of their team. We will elaborate on this in the Discussion section.

Empowerment and trust

First author's auto-ethnographic vignette (at nine months)

Managers implementing Lean will experience resistance. People feel judged and criticized. Some get angry. I learned to keep the dialogue open. I indicated problems and pointed out that the solutions, initially proposed by management, did not work. I asked what they thought the

Positive responses	Objections
"*Gemba* walks allow me to quickly identify problems on floor, and help to very quickly solve the myriad of small problems that plague all operations"	"But I'm already out of the floor all the time anyway"
"*Gemba* walks foster alignment of goals by demonstrating the importance of the metrics to all the associates"	"We already have a daily production meeting. This will mean we will talk about the same issues all over again"
"They force the manager out of his office, away from his email, and out to the shop where the real action [the *gemba*] is. The manager will see problems with his own eyes, hear about problems directly from the operating associates, and can take immediate action to help correct them"	"I'm very busy. I don't have time to do a *gemba* walk every day"
"They bring together the critical players in an operating room (operators, managers, nurses, medical doctors, etc.) so that it is easier to take quick actions to solve small, but nagging, problems. Each person hears the same description of the problems, and each can immediately offer their expertise to help resolve them. The speed with which problems can be resolved can be dramatically increased compared to traditional problem solving"	"It's too loud on the shop floor to hear anything. We need to meet where we can hear each other"
	"My people already know what they have to do. They see the visual metric board every day. They don't need me to look at it. Besides, I get the same data emailed to me every day"
	"I already have a fantastic communication system of voicemails, which I listen to while driving in to work. The communication presented in the *gemba* walk is all a duplicate of what I already know"

Table I. Examples of positive responses and objections to going to the *gemba*

solution should be and why Lean caused so much trouble. I gave room for criticism and objections. Sometimes you need several conversations to understand peoples' views. Many people think that the manager needs to solve everything. But when something is not working, that does not imply the failure of management. Moreover, it is an illusion to say that managers are the problem solvers.

It was unclear at VUmc who had responsibility for a certain problem, such as postoperative wound infections. As a manager I set frames and emphasize the fact that all employees have influence on the process and have to take responsibility. Employees do not have the free choice to work with Lean or not; I make them accountable. They cannot blame others, but instead must ask themselves what they can do to create a solution. Often it is a test of endurance and resistance but this should not be discouraging. I am glad to set the example. For instance, when an operation is cancelled I call the plan bureau to find out why. When someone feels insulted, I find out how we can cooperate in a better way. Perhaps the planners should join our meetings so that everyone will understand each other better. Such a conversation calls for diplomacy. It is not useful to say that something went wrong because that breaks contact. It is better to say

you do not understand what exactly happened and you would like to hear the other side of the story. It is not useful to blame; you need to talk about the process. I trust that people naturally strive to do good. As a manager therefore I am open to input. It is not just my department that is going through a learning process: I must change as well.

This vignette addresses the importance of the relation between empowerment, trust and responsibility in Lean leadership. This was also stressed by study respondents. For example: "A lean leader trusts their staff and not only dares to delegate responsibility […] to enhance their problem-solving abilities" (quote 1). The importance of lean leaders fostering empowerment and trust, and showing modesty:

(1) Interviewee quotations on modesty and trust:
- "A Lean leader trusts their staff and not only dares to delegate responsibility to the work floor but also considers it part of their own role to coach the people there to enhance their problem-solving abilities. They do that by going out onto the floor, where the work and the coaching actually take place, to see what is happening there. Lean leaders accept that they may not themselves possess the know-how needed to do the job in hand, but what they can do is help the person concerned to analyse the situation, to formulate solutions and to try them out in practice".
- "A Lean leader knows exactly what the objective is, can focus upon it single-mindedly and can apply a keen sense of direction. Yet at the same time they also allow maximum flexibility. They trust in the ideas and contributions of everyone in the team, and they give their personnel an important say in the decision-making process".
- "Lean leaders have to facilitate and support, they have to be modest and they have to acknowledge their own limitations. But they must also accept responsibility, give other people goals to work towards, be visible, make sure that their staff receive the praise they deserve and, above all, be brave enough to improve the current situation; day after day".

(2) Interviewee quotations on empowerment:
- "In their words and actions, they display the kind of behaviour befitting an organization of stature. You can recognize a Lean leader from the people around them: they are developing all the time, and are always capable of recognizing and resolving those issues which are preventing the organization from achieving the goal it has set itself".
- "They are familiar with the underlying work processes in their organization, and have a 'nose' for what is really important. And they can simplify complex problems by working with their team, and so find the best solution".
- "Lean leaders manage processes, not numbers. What counts first and foremost is not the financial result, but the process yield. Rather than seizing instantly upon a solution or conclusion, the Lean leader tries to understand the situation fully. They are constantly asking 'why?'".
- "And not only are they good at teaching, they are inspiring coaches who are able to create an organization which is learning all the time."

The vignette shows that responsibility can be assigned: people are made accountable by the Lean leader. Respondents spoke in similar terms, for example, of "delegating responsibility". This informs us about how, in health-care Lean leadership, leaders use responsibility, passing it to others, to enhance care practice. While assigning responsibilities, a relationship of trust is fostered, which leaders expect to increase their employees' problem-solving abilities (empowerment). The findings showed that leaders aimed to create space for employees to take part in the decision-making process (according to quote 1). The findings showed that respondents value listening and taking others seriously to uncover problems before jumping to any conclusions. Managers are often the first to argue their own ideas, and yet, managers are usually furthest away from the *gemba*. Being open and responsive to employees' perspectives and supporting them in the development of their abilities instill a sense of ownership of and responsibility for the work, and any problems relating to the work.

Modesty and openness
First author's auto-ethnography vignette

> After working with Lean for 1 year I did not know how to continue. This impasse was broken by a visit from John Toussaint, an American who is prominent in the implementation of Lean in healthcare. He asked me questions while observing me. One was: "you have a capital-intensive department. Patients put their lives in your hands. How do you know for certain whether your process is safe?" I answered that we had inspection reports and measurements, but he asked further, "How do you know that your measurement contributes to safety? How often does your measurement take place? And would you recommend your family to undergo surgery here?" My gut feeling was "yes" but I could not substantiate it.
>
> For 2 weeks I felt disconcerted because I could not answer that basic question. I was proud of our success: we had 50 improvement plans, a safety management system and our safety rounds. I was successful and my managers expressed their appreciation, but apparently I asked the wrong questions. I thought I had everything under control but suddenly I had a big problem. Not directly with patients, but in terms of knowledge. I realized that things needed to change, but how? The more I looked at it, the more frustrated I became.
>
> I talked to my Lean coach: we needed to create focus. The important point was increasing patient safety. I realized that this should not be a project but something that employees kept in mind every day. The standards of inspection should not be directive; we needed to look at our measurements in a critical way rather than creating tension. We stopped measuring efficiency. The occupancy of the operating theatre and the start and end time of an operation do not add value for the patient. From a patient's perspective, much more important are minimal waiting times, being able to drink and eat until the last possible moment before an operation and the reassurance that all staff is fully competent. "Efficiency is not insignificant, but Lean entails doing only what is asked for and doing it right the first time. That is automatically efficient. It is meaningful to question whether efficiency should be measured".

The vignette illustrates that modesty is vital for listening and must be done from a position of openness and inquisitiveness rather than one of knowing. It is almost impossible to solve problems without a deep understanding of the current state of practice. It is the key to recognize and halt any beliefs, prejudices, biases and archetypes when listening to employees for new opportunities and adjustments that need to be

made. This study found that modesty is a key characteristic for successful Lean leadership and transformation of cultures. The ability to be able to express uncertainty may bring leaders closer to the workforce, and it promotes others to show sincerity in return. The respondents report that by taking steps to reveal their vulnerabilities and showing modesty, leaders can create a culture where concerns are raised more readily, and this also helps leaders to develop (the author frequently discussed issues with employees and his Lean coach), as well as understanding the patient perspective became a key element in developing as a leader (quotes 2, 3 and 4). Respondents stress the need for cooperation with their team and a process-oriented way of working (quote 5). According to respondents, Lean leadership, therefore, entails creating a learning environment (quote 7).

Discussion

A number of issues are raised by this ethnographic case study, which have a range of implications for leadership in health-care practice. The findings highlight the importance of:

- going to the *gemba* to see and experience practice, instead of primarily focusing on measurement of outcome parameters;
- processes of empowerment and trust; and
- modesty and openness, in successful Lean leadership.

Our findings also show that there are a number of challenges to be overcome when implementing these tactics as part of a Lean management programme. Here we look at those barriers, in the context of these findings, and outline a framework for Lean leadership.

Understanding barriers to Lean conversion

In line with the findings of our study, the literature documents various issues that can hinder the sustainability of Lean implementation. For example, among staff who are under pressure to perform and, therefore, need all their time to complete their "regular" work, it is often difficult to sustain enthusiasm for a new way of working. Such resistance to adopting change has been reported by others (Davis and Adams, 2012; Anand *et al.*, 2012). Therefore, it is the case that leaders who intend to introduce Lean successfully should anticipate and prepare for challenges. There are four decisive factors in addressing these.

The openness of the workforce to change. Staff perceptions of the likely benefits of a change strongly influence its chance of success (Morrow *et al.*, 2012): they need to believe that an initiative will have a positive effect upon their own tasks and performance (Anand *et al.*, 2012).

An understanding of the complexity of the change. Many factors can affect a change process, including user wishes, the organizational context and wider socio-political developments. Therefore, it is essential to understand the complexity of the processes involved and the decision-making surrounding them (Morrow *et al.*, 2012).

Proof that the change will actually produce the desired effect. To convince those involved of the benefits, it is important to provide them with an insight into the expected costs and returns (Morrow *et al.*, 2012).

How the change is anchored within the organization. For a change to take hold, old ways of working need to be replaced with new practices and with policy aligned to them (Morrow *et al.*, 2012).

To be a successful transformational leader, it is important to understand these barriers and be equipped to deal with them (Aij *et al.*, 2013).

A framework for successful Lean leadership

Becoming a successful Lean leader not just entails knowing how to implement changes and monitor key performance indicators; sustainability counts on there being a cultural change. This is not only true for work-floor employees but also for leaders (Keiser, 2012; Mann, 2012). It is reported that most Lean initiatives are unsuccessful because of a failure to change leadership practices (Mann, 2009, 2012). However, despite the importance of Mann's framework in directing a mechanistic approach for Lean management, this approach does not provide insights into how to take into account the contextual aspects of leadership and fails to capture the true essence of leadership as a fundamental pillar of any Lean management system. The present study reveals that leadership success can be achieved by appreciating the softer aspects of human relationships, as well as the value of *gemba*, being able to empower others and show modesty and openness. Effective transformational leadership requires connecting quantitative measures (e.g. key performance indicators) with qualitative workplace knowledge and understanding of human psychology (Vidal, 2007).

Gemba

For effective production, managers should focus on all the *gemba* events that give the real picture of the *gemba*, rather than just the data obtained through reports. Managers should frequently visit the work floor, especially when problems arise. There are five *gemba* principles, (Womack and Jones, 2003):

(1) When problems arise, go to the *gemba*.

(2) Check the *gimbetsu* (i.e. or equipment, tools, near misses and customer complaints).

(3) Take temporary countermeasures on the spot.

(4) Find the root cause of problems.

(5) Standardize for prevention of recurrence.

According to Womack and Jones (2003), it is important that a *gemba* walk is done very publicly, so that managers are available to all employees to answer questions, share concerns or simply say hello. The employees also see that the manager truly cares about the metrics on the visual metric boards. Therefore, numbers are not some abstract measures created by distant accountants; they are critical measures of how well the operation is being performed. Thus, the manager is implicitly demonstrating that these results are important. In some organizations, *gemba* walk time is designated as "sacred", with a designated time, so that "even the CEO will learn not to schedule meetings during this sacred time" (Toussaint and Berry, 2013). We found some objections to walking the *gemba*, and many of these were because managers felt that other responsibilities took priority. By formally scheduling a

regular time for the manager to be out on the floor, there is a much better chance of getting away from the office.

Empowerment

It is often hard to get all the critical stakeholders together at the same time to review and discuss a problem. At VUmc, we try to do this with regular staff meetings, but it has a few drawbacks. For one thing, the meetings happen when the information needed is not readily available. During a *gemba* walk, all the people are together, they all hear about the problem at the same time and see the same data, which gives them empowerment and lets them take responsibility. Therefore, they are all in a position to quickly decide on a course of action and to initiate that action. This approach does not always work for complex problems, but it works very well for the most common, nagging problems that are easily solved with a little ingenuity and some good follow-up. Empowerment of employees is associated with greater on-the-job satisfaction, and this has been shown to relate to cultural change and successful Lean transformation (multiple sources).

How leaders can promote a culture that embraces change

A culture that considers the identification and implementation of changes as a normal, everyday procedure is, therefore, regarded as a key factor in the successful introduction of Lean. Indeed, this particular point is emphasized by a number of authors (Simon and Canacari, 2012; Mann, 2009;Anand *et al.*, 2012). Simon and Canacari (2012) recommend that leadership "create a favourable environment in which problems are recognized as opportunities for improvement". Mann (2009) writes that, "Successful sustained Lean conversions often involve changes in culture […] where effective Lean leadership comes from the top as well as from lower in the organization". Similarly, Anand *et al.* (2012) writes, "proactive employee commitment to continuous improvement is essential to gain any long-term traction and provide strategic organizational benefits".

Knowing that organization culture is a very important factor for successful Lean transformation, the next question is: how can we address that, and what kind of leadership is required? According to Liker and Convis (2012), you need leaders who are prepared to make:

> […] a deep, time-consuming and expensive investment in everyone in the organization because they truly believe that their employees are their most precious resource. The role of the leader in this context is to be open to the kind of self-development needed […]; develop subordinates so that they grow and improve […]; remove obstacles that prevent employees doing their work as expected; and set challenges and goals so that teams at all levels of the organization can contribute to continuous improvement and attainment of its long-term goals.

Weiner *et al.* (2006) assert that firm leadership from the top of the organization is a crucial pre-condition for the successful implementation of quality-improvement initiatives like Lean. Only senior leaders can make quality a first priority, forge a culture dedicated to it and provide the financial and human resources needed to develop a learning organization (Weiner *et al.*, 2006).

Looking at healthcare in particular, Simon and Canacari (2012) describe a number of factors that contribute to successful Lean leadership. A leader, they say, must

emphasize solutions to problems rather than assigning blame; ensure that a team has the appropriate multidisciplinary composition to involve all important stakeholders, thus generating mutual respect; be able to motivate and energize a team; and give employees the opportunity to express their ideas and suggestions in "an open, friendly and structured environment where their input is valued and acted upon".

Creating an organization that is improving all the time requires a combination of commitment from senior management and a prevailing culture of continuous improvement. And that means changing the focus from each person's own job to horizontal processes; that is, what adds value for the consumer and how it can be brought about (Liker and Convis, 2012). Mann (2009) also identifies four essential contributions from senior leaders:

(1) developing and implementing structures and processes that anticipate and respond to the difficulties of a Lean initiative;

(2) transforming commitments to change into actual change, supporting and sustaining new behaviours and practices;

(3) establishing and maintaining new, process-focused measures; and

(4) creating conditions in which a sustainable Lean culture of continuous improvement can develop.

These characteristics of leadership apply to all layers in any organization. It is not enough for people only on one tier – management or lower down – to implement changes. It is only by enforcing these principles throughout an organization that Lean becomes second nature for everyone. However, that said, the emphasis certainly differs from one level to another. Within particular departments, for example, the focus will be on implementing Lean tools and keeping people motivated. Higher up, there will be a greater emphasis on maintaining the culture of continuous improvement through permanent observation to identify where things can be done better as well as by challenging people to go in search of enhancements.

This study has a number of limitations that may restrict the generalizability of the findings. The study is an auto-ethnographic account of one person's (the first author's) learning experience in implementing Lean at a single centre and, thus, may not reflect the experience of other leaders and other centres. However, combining and validating auto-ethno biographies with interview findings is a key strength of this work. Furthermore, the exploration of softer aspects of leadership and integration into a framework consisting of the three values of *gemba*, empowerment and modesty offers advantages over other, less-specific, theoretical systems that have been suggested to date.

Conclusion

This research has provided a critical analysis of contemporary Lean leadership in the context of a health-care practice. It has examined Lean leadership within an ethnographic framework and, by doing so, has added to the existing Lean leadership discourse from an inside perspective. In addition, the research has emphasized the extent to which leadership characteristics shape the context in which health-care professionals operate. This study adds further insights to qualitative aspects of

leadership, such as ethical values, respect for others, modesty, vision and inter-personal relationships. As to what makes a good leader, it can be said that a leader is a person who inspires those around them to join them on a journey towards a challenging destination. A Lean leader is no exception in this respect. Creating value for the patient (in our case, or the customer in other organizations) is at the heart of this process. It requires the courage to question the status quo and to keep doing so day after day. The Lean leader combines this with the discipline needed to work towards the set objective in a structured and consistent manner.

Leaders must be consistent but, at the same time, flexible. By not being afraid of going to the work floor to study hypotheses in practice, by showing themselves to be part of the team and able to empower others and by combining willpower with modesty, leaders will learn not just how to best implement Lean but also how to become true leaders.

References

Aij, K.H., Simons, F.E., Widdershoven, G.A. and Visse, M. (2013), "Experiences of leaders in the implementation of Lean in a teaching hospital – barriers and facilitators in clinical practices: a qualitative study", *BMJ Open*, Vol. 3 No. 10, p. e003605.

Anand, G., Chhajed, D. and Delfin, L. (2012), "Job autonomy, trust in leadership, and continuous improvement: an empirical study in health care", *Operations Management Research*, Vol. 5 Nos 3/4, pp. 70-80.

Baird, K., Hu, K.J. and Reeve, R. (2011), "The relationships between organizational culture, total quality management practices and operational performance", *International Journal of Operations & Production Management*, Vol. 31 No. 7, pp. 789-814.

Bell, E. and Bryman, A. (2007), "The ethics of management research: an exploratory content analysis", *British Journal of Management*, Vol. 18 No. 1, pp. 63-77.

Boyle, M. and Parry, K. (2007), "Telling the whole story: the case for organizational autoethnography", *Culture and Organization*, Vol. 13 No. 3, pp. 185-190.

Brown, T. and Duthe, R. (2009), "Getting 'Lean': hardwiring process excellence into Northeast Health", *Journal of Healthcare Information Management*, Vol. 23 No. 1, p. 34.

Daft, R. and Armstrong, A. (2009), "Organization Theory and Design", 1st Cdn ed., Nelson Education, Toronto.

Davis, J. and Adams, J. (2012), "The 'releasing time to care – the productive ward' programme: participants' perspectives", *Journal of Nursing Management*, Vol. 20 No. 3, pp. 354-360.

de Bucourt, M., Busse, R., Güttler, F., Reinhold, T., Vollnberg, B., Kentenich, M., Hamm, B. and Teichgräber, U.K. (2012), "Process mapping of PTA and stent placement in a university hospital interventional radiology department", *Insights into Imaging*, Vol. 3 No. 4, pp. 329-336.

Dombrowski, U. and Mielke, T. (2013), *Lean Leadership – Fundamental Principles and Their Application*, Elsevier, Amsterdam, pp. 569-574.

Ehigie, B.O. and Ehigie, R.I. (2005), "Applying qualitative methods in organizations: a note for industrial/organizational psychologists", *Quality Reports*, Vol. 10 No. 3, pp. 621-638.

Ellis, C.S. and Bochner, A. (2000), "Autoethnography, personal narrative, reflexivity: researcher as subject", in Denzin, N.K. and Lincoln, Y.S. (eds), *Handbook of Qualitative Research*, 2nd ed., Sage, Thousand Oaks, CA, pp. 733-768.

Fine, B.A., Golden, B., Hannam, R. and Morra, D. (2009), "Leading lean: a Canadian healthcare leader's guide", *Healthcare Quarterly*, Vol. 12 No. 3, pp. 32-41.

Garb, H.N., Wood, J.M., Lilienfeld, S.O. and Nezworski, M.T. (2002), "Effective use of projective techniques in clinical practice: let the data help with selection and interpretation", *Professional Psychology: Research and Practice*, Vol. 33 No. 5, p. 454.

Graban, M. (2011), *Lean Hospitals: Improving Quality, Patient Safety, and Employee Engagement*, CRC Press, Boca Raton, FL.

Jaques, E. and Clement, S.D. (1991), *Executive Leadership, a Practical Guide to Managing Complexity*, Blackwell, Oxford.

Keiser, J.A. (2012), *Leadership and Cultural Change: Necessary Components of a Lean Transformation*, IGLC 2012, San Diego, CA.

Labuschagne, A. (2003), "Qualitative research-Airy fairy or fundamental", *The Qualitative Report*, Vol. 8 No. 1, pp. 100-103.

Liker, J.K. (2008), *The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer*, Recording for the Blind & Dyslexic, New York, NY.

Liker, J.K. and Convis, G.L. (2012), *The Toyota Way to Lean Leadership*, McGraw-Hill, New York, NY.

Mann, D. (2009), "The missing link: Lean leadership", *Frontiers of Health Services Management*, Vol. 26 No. 1, pp. 15-26.

Mann, D. (2012), *Creating a Lean Culture: Tools to Sustain Lean Conversions*, CRC Press, Boca Raton, FL.

Mazur, G. (2003), "Voice of the customer (define): QFD to define value", *Proceedings of the 57th American Quality Congress, KS*, pp. 1-7.

Melanson, S.E., Goonan, E.M., Lobo, M.M., Baum, J.M., Paredes, J.D., Santos, K.S., Gustafson, M.L. and Tanasijevic, M.J. (2009), "Applying Lean/Toyota production system principles to improve phlebotomy patient satisfaction and workflow", *American Journal of Clinical Pathology*, Vol. 132 No. 6, pp. 914-919.

Morrow, E., Robert, G., Maben, J. and Griffiths, P. (2012), "Implementing large-scale quality improvement: lessons from the productive ward: releasing time to care™", *International Journal of Health Care Quality Assurance*, Vol. 25 No. 4, pp. 237-253.

Papadopoulou, T.C. and Özbayrak, M. (2005), "Leanness: experiences from the journey to date", *Journal of Manufacturing Technology Management*, Vol. 16 No. 7, pp. 784-807.

Rutledge, J., Xu, M. and Simpson, J. (2010), "Application of the Toyota Production System improves core laboratory operations", *American Journal of Clinical Pathology*, Vol. 133 No. 1, pp. 24-31.

Schein, E.H. (2010), "Three cultures of management: the key to organizational learning", *Global Working. Living and Working Across the World with Cultural Intelligence*, John Wiley & Sons, San Fransisco, CA, Vol. 37.

Senge, P.M. (1996), "The ecology of leadership", *Leader to Leader*, Vol. 2 No. 6, pp. 18-23.

Simon, R.W. and Canacari, E.G. (2012), "A practical guide to applying lean tools and management principles to health care improvement projects", *AORN Journal*, Vol. 95 No. 1, pp. 85-103.

Sparkes, A.C. (2000), "Autoethnography and narratives of self: reflections on criteria in action", *Sociology of Sport Journal*, Vol. 17 No. 1, pp. 21-43.

Toussaint, J.S. and Berry, L.L. (2013), "The promise of Lean in health care", *Mayo Clinic Proceedings*, Vol. 88 No. 1, pp. 74-82.

Vidal, M. (2007), "Lean production, worker empowerment, and job satisfaction: a qualitative analysis and critique", *Critical Sociology*, Vol. 33 Nos 1/2, pp. 247-278.

Weick, K.E. and Browning, L.D. (1986), "Argument and narration in organizational communication", *Journal of Management*, Vol. 12 No. 2, pp. 243-259.

Weiner, B.J., Alexander, J.A., Shortell, S.M., Baker, L.C., Becker, M. and Geppert, J.J. (2006), "Quality improvement implementation and hospital performance on quality indicators", *Health Services Research*, Vol. 41 No. 2, pp. 307-334.

Womack, J. and Jones, D. (2003), *Lean Thinking: Banish Waste and Create Wealth in Your Corporation*, revised edn., Simon & Schuster, New York, NY.

Ybema, S., Yanow, D., Wels, H. and Kamsteeg, F. (2009), *Organisational Ethnography: Studying the Complexities of Everyday Life*, Sage Publications, London.

Corresponding author
Kjeld Harald Aij can be contacted at: k.aij@vumc.nl