ORIGINAL RESEARCH

Two Different Strategies to Facilitate Involvement in Healthcare Improvements: A Swedish County Council Initiative

促进参与医疗改进的两种不同策略：瑞典县议会计划

Dos estrategias diferentes para facilitar la participación en las mejoras sanitarias: iniciativa de una Diputación Provincial sueca

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ABSTRACT

Background: From a management point of view, there are many different approaches from which to choose to engage staff members in initiatives to improve performance.

Objective: The present study evaluated how two different types of improvement strategies facilitate and encourage involvement of different professional groups in healthcare organizations.

Methods/Design: Empirical data of two different types of strategies were collected within an improvement project in a County Council in Sweden. The data analysis was carried out through classifying the participants' profession, position, gender, and the organizational administration of which they were a part, in relation to their participation.

Setting: An improvement project in a County Council in Sweden.

Participants: *Designed Improvement Processes* consisted of n=105 teams and *Intrapreneurship Projects* of n=202 projects.

Intervention: Two different types of improvement strategies, *Designed Improvement Processes* and *Intrapreneurship Projects*.

Main Outcome Measures: How two different types of improvement strategies facilitate and encourage involvement of different professional groups in healthcare organizations.

Results: Nurses were the largest group participating in both improvement initiatives. Physicians were also well represented, although they seemed to prefer the less structured *Intrapreneurship Projects* approach. Assistant nurses, being the second largest staff group, were

poorly represented in both initiatives. This indicates that the benefits and support for one group may push another group aside.

Conclusions: Managers need to give prerequisites and incentives for staff who do not participate in improvements to do so. Comparisons of different types of improvement initiatives are an underused research strategy that yields interesting and thoughtful results.

摘要

背景：从管理的角度来看，可以选择很多方法用于改善员工表现的措施。

目的：本研究评估了医疗机构中促进和鼓励不同职业群体的两种不同类型的改善策略。

方法/设计：在瑞典的一个县议会的改进项目中，收集了两种不同策略的经验数据。通过分类与参与者有关的职业、地位、性别和所处的组织管理方式，对这些数据进行了分析。

环境：瑞典一个县议会的改善项目。

参与者：改善流程 包括团队（n = 105个团队）和内部创业项目（n = 202个项目）。

干预：两种不同类型的改进策略，设计改善流程和内部创业项目。

主要结果指标：两种不同类型的改进策略如何实现和鼓励医疗机构中不同职业群体的参与。

结果：护士是参与两项改善工作的最大群体。医生们也有很好的表现，但是他们似乎更喜欢结构化程度较低的内部创业项目。而作为第二大工作人群的助理护士在这两个小组中均表现不佳。这表明，为一组工作人员带来的效益和支持会推动另一组。

结论：管理者需要说明不参与改善项目的员工的先决条件和动机。比较不同类型的改善工作是一种未充分利用的研究策略，能得到有趣的和令人深思的结果。

SINOPSIS

Antecedentes: Desde el punto de vista de la gestión, hay muchos enfoques a la hora de involucrar al personal en iniciativas que mejoren el rendimiento.

Objetivo: Este estudio ha evaluado cómo dos estrategias diferentes de mejora facilitan y fomentan la participación de diferentes grupos de profesionales en las organizaciones sanitarias.

Métodos/Diseño: Se recopilaban los datos empíricos de dos tipos diferentes de estrategias dentro de un proyecto de mejora en una Diputación Provincial de Suecia. El análisis de los datos se llevó a cabo mediante la clasificación profesional de los participantes, la posición, el género y la administración de la organización de la que formaban parte, en relación con su participación.

Entorno: Un proyecto de mejora en una Diputación Provincial en Suecia.

Participantes: El Diseño de los procesos de mejora consistía en 105 equipos y 202 Proyectos de intraemprendizaje.

Intervención: Dos estrategias diferentes de mejora, Diseño de los procesos de mejora y Proyectos de intraemprendizaje.

Criterios de valoración principales: Cómo dos estrategias de mejora facilitan y fomentan la participación de distintos grupos profesionales de las organizaciones sanitarias.

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Resultados: El personal de enfermería es el grupo participativo más numeroso de ambas iniciativas de mejora. También había una buena representación por parte de los médicos, aunque parecía que estos se decantaban por un enfoque menos estructurado de los Proyectos de

intraemprendizaje. Los auxiliares de enfermería, es decir, el segundo grupo de personal más numeroso, estaban mal representados en ambas iniciativas. Esto indica que los beneficios y el apoyo de un grupo pueden implicar dar de lado al otro grupo.

Conclusiones: Los gerentes deben

dar condiciones previas e incentivos al personal que no participe en las mejoras para que lo haga. Las comparaciones de los diferentes tipos de mejora son una estrategia de investigación infrutilizada que proporciona resultados interesantes y sorprendentes.

INTRODUCTION

Today's fast-paced world is increasingly characterized by continuous changes and efforts to leverage quality and efficiency of operations. From a management point of view, there are many degrees of freedom in how to engage in initiatives to improve performance. For instance, top-down approaches mostly involve actors at the center of the organization and tend to dismiss ideas and initiatives from local units with less influence and legitimacy.¹ In many situations, it is of importance to select an improvement strategy that engages certain groups. Strong professions and important stakeholders can either thwart or facilitate an incentive.^{2,3} An important factor to understand, therefore, is that the way improvement initiatives are organized can both enable and constrain involvement. The present study aims to describe and evaluate how two different types of improvement strategies facilitate and encourage involvement of different professional groups in healthcare organizations, while others could be locked out. An analysis of evaluation reports from the Health Foundation Improvement Program highlights two of ten challenges: the importance of stimulating participation and the risk of a lack of staff participation.⁴ Berwick et al argue that healthcare systems face great challenges to motivate the staff to work with improvements.⁵ One way to increase the engagement in improvement work is to dedicate specific professions (ie, physicians) as project leaders.² Other initiatives use different incentives to encourage healthcare staff improvements, like pay for performance (P4P)⁶ or naming-and-shaming.⁷ Another way to use incentives is to attract participation in improvement projects, not rewards for results or outcomes.⁸ To our knowledge, little has been written about staff member involvement in improvement work, except for the importance of engaging physicians and other important stakeholders.^{2,3}

TWO IMPROVEMENT STRATEGIES FROM A THEORETICAL PERSPECTIVE

In this study, two types of improvement initiatives are conceptualized and evaluated empirically. The first type is called Designed Improvement Processes and consists of a methodologically guided collaborative program, following the Breakthrough Series Collaborative.⁹ The second type is called Intrapreneurship Projects and is characterized by a project methodology that is set by an intrapreneur in a rather free manner. These two models differ significantly in

their assumptions of how to organize for improvements. To deepen the understanding of how Designed Improvement Processes and Intrapreneurship Projects have effects on who is engaging in improvement initiatives, the following assumptions are used. First, Designed Improvement Processes are defined as pre-defined structures that move improvement projects from start to finalization.¹⁰ Second, the Intrapreneurship Projects are defined as activities in which individuals inside organizations pursue opportunities.¹¹

Designed Improvement Processes

The Designed Improvement Process is a common way of organizing for improvement in organizations. It is used as an umbrella term for a wide range of arrangements that organizations adopt. For instance, the systematic use of quality improvement teams is one such process.¹² Their aim is to identify and analyze important "vital fews"¹³ by using cross-functional problem-solving teams. Another similar type is DMAIC (Define, Measure, Analyze, Improve, and Control) projects in the context of Six Sigma. It offers a structured method for process improvements patterned after the Plan-Do-Check-Act (PDCA) cycle, which in turn was proposed by Shewhart.¹⁴ In the healthcare sector, Breakthrough Series Collaborative methodology is used as a way to organize such improvement initiatives.⁹ This approach is based on a structure in which healthcare teams from various organizations create a joint learning experience. Several members of the organization join collaborative efforts to solve a specific problem. Although such teams may consist of experts in quality methods, the emphasis is to organize people who have first-hand experience of the problem that the team effort is supposed to solve.¹²

Participants who implement Designed Improvement Processes are expected to follow a specific route that others have developed.¹⁰ An important element is that the Designed Improvement Process is a strategic priority for management. By having a route by which participants may enter, the organization creates an infrastructure that is conducive to improvements, such as the Breakthrough Series Collaborative. As a strategic priority, management assigns legitimacy for participation in the Designed Improvement Processes.¹⁵

Intrapreneurship Projects

The Intrapreneurship Project is built on the idea that a champion with appropriate resources engages in constructive, goal-oriented activities that lead to

change.¹⁶ The Intrapreneurship Project is based on the premise that an intrapreneur has a solution to a specific problem within her organization, there is a space for play for the intrapreneur, and that the intrapreneur gains legitimacy through achievements recognized by the organization.¹⁷

An intrapreneur is a participant that brings about change within specific organizational contexts. An identified problem in organizational performance is thus the foundation for Intrapreneurship Projects. Such problems can be anything from technical solutions that don't seem to work properly¹⁸ to organizational coordination¹⁹ or clinical innovations.²⁰ The requirement for an intrapreneur to engage in problem solving is that there is freedom to act.¹³ This implies that the intrapreneur has both the ability and necessary resources in the organizational environment to act. A problem can be anything that is generally conceived of by the members of the organization and does not necessarily need to be associated with the intrapreneur. The role of the intrapreneur is that of a participant that identifies designs and realizes a solution for this problem in specific projects.

The innovative actions depend on the intrapreneur's interests, competence, and acceptance by other members of the organization. Legitimacy for engaging in new activities is dependent on the informal social position the intrapreneur has created in the organization. Røvik suggests that social authority is of central importance for successful translation of new ideas into an organization.²¹ The intrapreneur does not, however, operate in isolation. Bartlett and Dibben argue that the intrapreneur establishes authorization and political support from sponsors.²² It is also assumed that the intrapreneur needs other people to design and realize ideas. An Intrapreneurship Project is therefore a collective achievement.

THE COUNTY COUNCIL IMPROVEMENT PROGRAM—THE EMPIRICAL CONTEXT

The study took place in a county council southeast of Sweden. In this healthcare organization, more than 6600 employees are divided into eight different organizational administrations: Primary Care, Somatic Specialist Care, Psychiatric Special Care, Facilities and Service, Information Technology (IT), Dental Care, Folk High Schools, and Support Organization. A large number of professions and staff categories are represented. Those could be classified into four different groups: healthcare staff (74%), dental care staff (6%), administrative staff (12%), and "other," such as school personnel and support staff (8%).

An improvement program was initiated to encourage improvement initiatives and to spread the skills and knowledge in quality improvement in the organization. This program is financed by special grants that have been awarded by the County Council Delegate and coordinated by the top management team. All healthcare departments, primary healthcare

centers, dental care centers and other units in the county council are invited to accomplish improvement projects in two different tracks: (1) applying for financial support for one's own improvement project (Intrapreneurship Projects) and (2) participating in the Breakthrough Series collaborative programs (Designed Improvement Processes).

METHODS

Sample and Data Collection

Data were drawn from (1) the applications in the Intrapreneurship Projects track and (2) a database connected to the Designed Improvement Processes track. The Intrapreneurship Projects data emerged from a total of 202 applications submitted from 2007 to 2009. The number of people involved was 230. The Designed Improvement Processes listed a total of 477 people participating from 2007 to 2010. The first author collected all data. The study was approved by the county council director and followed the ethical principles and general rules of good research. All data were treated confidentially and analyzed anonymously.

Data Analysis

The data analysis was carried out through classifying the participants' profession, position, gender, and the organizational administration of which they were a part. A categorization of the staff disciplines was made as follows: registered nurses including midwives; assistant nurses and caretakers; physicians; managers—healthcare staff; managers—support staff (eg, headmaster, library manager, communication manager, IT manager); other healthcare staff (eg, psychologists, physiotherapists, dieticians, medical secretaries); and other support staff (eg, business developers, educationalists, messengers, economists, IT personnel).

After categorization, descriptive (actual and relative frequencies) and inferential statistics (chi-square test) were used in the analysis. To evaluate participation, the staff groups were compared to the overall employees in that group to the degree to which they were statistically expected to participate. Expected values were statistically calculated using contingency tables.²³ The total number of people participating in the two tracks was 707, but some analysis was focused on healthcare staff only ($n=609$) due to the small sample sizes of other staff groups.

RESULTS

The largest group, Somatic Specialist Care, had the most people engaged in both types of improvement strategies. Of the $n=202$ Intrapreneurship Projects, 131 (65%) came from the Somatic Specialist Care administration. In the Designed Improvement Processes, the majority also came from Somatic Specialist Care, in total 59 of 105 (56%). In the Primary Care administration, 23 of the 29 primary care centers were engaged in Intrapreneurship Projects. In the Designed Improvement Processes, 22 teams from 12 of the primary care

centers took part. Six primary care centers were not represented at all. The Psychiatric Specialist Care administration was represented with eight Intrapreneurship Project applications and 15 teams in the Designed Improvement Processes. All administrations were represented in Intrapreneurship Projects, even if IT and Folk High Schools accounted for only one project application each. Two administrations, IT and Dental Care, had no teams represented in the Designed Improvement Processes.

Most participants in both types of improvement strategies were healthcare staff, which is the largest staff group in the county council. Included in this group are physicians, registered nurses, assistant nurses, and caretakers. Table 1 provides an overview of the actual frequencies of the participants in both the Intrapreneurship Projects and Designed Improvement Processes strategies compared to the general number of employees in the county council. The table shows that of the total nurses and midwives employed in the county council ($n=1931$), 155 had participated in the Designed Improvement Processes and 64 in the Intrapreneurship Projects. Those comparisons were made between the most represented professions (nurses, assistant nurses, and physicians), healthcare managers, support staff managers, and other participants as one healthcare staff group and one group of support staff. The distribution between men and women is also shown in Table 1. A total of 230 people stood behind the 202 Intrapreneurship Projects, 70% ($n=160$) of them women, which corresponds to the overall gender distribution in the county council. The 75 granted Intrapreneurship Projects were

produced by 81 people, mostly managers and physicians, 57 women and 24 men.

Except for assistant nurses, managers, and other healthcare staff, all profession groups participated to a degree statistically expected in the Intrapreneurship Projects track. Assistant nurses and other healthcare staff participated significantly less in Intrapreneurship Projects than would be statistically expected; only six of 202 Intrapreneurship Projects had an assistant nurse responsible for the application. Managers participated significantly more than expected in the Intrapreneurship Projects. The descriptive statistics indicated that nurses and assistant nurses were more likely to participate in the Designed Improvement Processes. Those trends are not statistically significant, however.

Female nurses are the largest staff group in the county council (25.7%) and are also the largest group of participants (29.1%). Overall, there are relatively more female nurses and female assistant nurses participating, but there are relatively more males from the physician group participating. The physicians in total are participating above their representation; 13.7% of the participants are physicians compared to 10.2% of the county council employees. Participation of healthcare staff by percentages is shown in Table 2.

In Intrapreneurship Projects, healthcare managers were significantly more inclined to participate than expected (Table 1). Calculated as percentages, managers' participation in both improvement strategies was high (Table 2). A majority of the participating managers were registered nurses, followed by other staff members, such as physiotherapists, psychologists, and

Table 1 Participants and Their Staff Categories Compared to the Overall Number of County Council Employees in That Category (Actual Frequencies, *f*)

	Intrapreneurship Project <i>f</i> (Women/Men)	Designed Improvement Processes <i>f</i> (Women/Men)	Overall in the County Council ^a <i>f</i> (Women/Men)
Nurses/midwives	64 (61/3)	155 (145/10)	1931 (1720/211)
Assistant nurses/caretakers	6 ^b (6/0)	55 (47/8)	1451 (1226/225)
Physicians	44 (15/29)	53 (20/33)	683 (275/408)
Managers, healthcare staff	71 ^c (45/26)	68 (55/13)	242 (175/68)
Managers, support staff ^d	9 (4/5)	11 (6/5)	51 (19/31)
Other healthcare staff ^e	10 ^c (8/2)	83 (77/6)	1527 (1362/165)
Other support staff ^f	26 (22/4)	52 (38/14)	798 (495/303)
Total	230 (160/70)	477 (387/90)	6683 (5305/1378)

^a County council data from December 31, 2008.

^b $P < .05$, c $P < .01$, Chi2, df 4.

^d eg headmaster, library manager, communication manager, information technology (IT) manager.

^e eg, psychologists, physiotherapists, dieticians, medical secretaries.

^f eg, business developers, educationalists, messengers, economists, information technology personnel.

Table 2 Participants and Their Inclination to Participate in Quality Improvement (QI) Projects Categorized by Staff Categories and Gender, Healthcare Staff Only

	Intrapreneurship Project % (Women/Men)	Designed Improvement Processes % (Women/Men)	Total QI Participation ^a % (Women/Men)
Nurses/ midwives	3.3 (3.5/1.4)	8.0 (8.4/4.7)	11.3 (11.9/6.2)
Assistant nurses/ caretakers	0.4 (0.5/0)	3.8 (3.8/3.5)	4.2 (4.3/3.5)
Physicians	6.4 (5.4/7.1)	7.8 (7.2/8.0)	14.2 (12.7/15.1)
Managers healthcare staff	29.3 (25.7/38.2)	28.1 (31.4/19.1)	57.4 (57.1/57.4)
Other healthcare staff^b	0.7 (0.6/1.2)	5.4 (5.7/3.6)	6.1 (6.2/4.8)

^a Percentages of the participation of the number of county council employees.

^b eg, psychologists, physiotherapists, dieticians, medical secretaries.

laboratory technologists (Table 3). There were no significant differences within the healthcare manager group in relation to profession; they were all participating as was statistically expected.

The county council has a large number of women managers, but the higher up in the organization, the fewer women there are. Most women are first-level managers or the equivalent, and most nurse managers are found at this level. In the largest administration, Somatic Specialist Care, 75% of the managers are women and 58% are registered nurses.

DISCUSSION

The data analyzed in this study emanate from two different improvement models, Designed Improvement Processes and Intrapreneurship Projects, the methodology of the former following the Breakthrough Series Collaborative (BC) program, and the latter following Free Application projects (FA) based on local problems addressed with the applicant's own choice of methodology. Skytt et al states that offering programs that are structured differently gives participants the opportunity to choose what they think suits them best.²⁴ At the same time, there is a risk of excluding other professions, as we saw with the assistant nurses participating to a small extent in both initiatives but especially in the Intrapreneurship Projects approach.

Registered nurses are the largest staff group in the county council and are highly represented in both Intrapreneurship Projects and Designed Improvement Processes. They seem very willing to participate, which might indicate that registered nurses as a group are a good base for quality improvement work. Further, the results indicate that (male) physicians, especially in a management position, are more attracted to the Intrapreneurship Projects. This in turn might mean that one way to attract physicians into improvement work is by offering the possibility to figure out both objectives and methodology in a more "free" process. Another way, suggested by Thor, is to make physicians team leaders in improvement work.² Gunningberg et

al found that low involvement from physicians was an unfavorable factor in improvement work.²⁵ Our study shows that the approach of offering different ways to participate might be an effective strategy to attract different staff categories, not least the physician group, which often is seen as an authority and therefore important to involve in the process.^{2,3,21} Different approaches can also be a way to let the participants—the staff members who should accomplish change and improvement—have some influence on what to do and how to do it.

Dixon-Woods et al concluded that there is no miraculous way to improve healthcare.⁴ On the contrary, multiple approaches are more likely to succeed. A study by Parker et al found that if participants felt they had some control, their work and efforts were positively affected.²⁶ They also conclude that physicians prefer autonomy. Mountford and Shojania stress that if physicians want to have control of and influence on improvements, they need to actively participate.²⁷ Nurses have already realized this, and as shown in both our study and in recent improvement literature, nurses are most likely to participate and easiest to motivate. The report "The Future of Nursing: Leading Change, Advancing Health"²⁸ points out that nurses have important and particular roles in the improvement of healthcare. As the largest staff group and having close contact with patients, nurses can easily and effectively improve quality, safety, and efficiency.

The results of our study do not show any clearly pronounced differences from a gender perspective when it comes to participation; representation is concordant with the overall county council gender distribution. However, the data so far point to the fact that teams led by female registered nurses and nurse managers were more successful in completing the projects (ie, producing a final report), as women are behind a vast majority of the finalization projects. Thor also found that women (in that case physicians) as team leaders were more successful than their male colleagues.² But results in this area seem divergent. Another study found

Table 3 Managers Participating in Quality Improvement Projects Divided Into the Largest Staff Categories (Actual Frequencies, *f*), Healthcare Staff Only

	Intrapreneurship Project <i>f</i> (Women/Men)	Designed Improvement Processes <i>f</i> (Women/Men)	Total <i>f</i> (Women/Men)
Nurses/midwives	43 (39/4)	49 (40/9)	92 (79/13)
Physicians	18 (1/17)	3 (1/2)	21 (2/19)
Other healthcare staff ^a	10 (5/5)	16 (14/2)	45 (28/17)
Total	71 (44/26)	68 (55/13)	158 (109/49)

^a eg, psychologists, physiotherapists, dieticians, medical secretaries.

no differences between male and female team leaders in performing successful improvement work.²⁹ Whether the difference in our study on this matter endures when more projects are finalized remains to be seen.

To change climate and culture, it is essential to erase the hierarchical organization, especially as it has been found to be an obstacle in improvement work.³⁰ Another important factor influencing participation and change is motivation; however, that was not investigated in this study. But the two different approaches can be seen as ways to try to motivate different professional groups. This is also shown, as physicians preferred the Intrapreneurship Projects, while assistant nurses seem to prefer a more guided approach and teamwork as the collaborative element in the Designated Improvement Processes. Incentives can be offered to motivate participation,^{6,7} but it is difficult to incorporate improvement work in one's daily work, keeping professionals engaged beyond the project phase, as expressed by Batalden and Davidoff: "Everyone in healthcare really has two jobs when they come to work every day: to do their work and to improve it."³¹

Management needs to be aware of risks when appealing to different professions; the benefits and support for one group may push another group aside.⁴ Therefore, the approach of the county council improvement program examined in this study, involving different models, could offer a way to simultaneously appeal to different staff professions. Skytt et al found that programs with different approaches can reach almost equal results but have the benefit of offering different methods that appeal to different participants—in their case, first-line nurse managers.²⁴

Our results indicate that the county council seems to be successful in encouraging managers, as 54.3% of the managers have participated in some way. One factor in the county council program's success when it comes to engaging staff and managers in improvement work might be the two different approaches offered. But at the same time, our results indicate that assistant nurses as a group might need extra motivational coaching to become active in structured improvement work and that they seem to prefer a collective, clearly guided approach. A challenge for the managers would be to

give prerequisites and incentives for staff who do not participate to do so. The approach of comparing different types of improvement strategies is an interesting and valuable research strategy. Classifying the different improvement strategies into more general classes (such as Designed Improvement Processes and Intrapreneurship Projects) will also improve the ability to generalize the improvements into something that has validity outside the studied cases.

REFERENCES

- Beer M, Nohria N, editors. *Breaking the code of change*. Cambridge, MA: Harvard Business School Press; 2000.
- Thor J. Getting going on getting better: how is systematic quality improvement established in a healthcare organization? Implications for Change Management Theory and Practice. PhD thesis. Karolinska Institutet, Stockholm, Sweden; 2007. <http://diss.kib.ki.se/2007/978-91-7357-274-3/thesis.pdf>. Accessed August 4, 2014.
- Kitson L. The need for system change: reflections on knowledge translation and organizational change. *J Adv Nurs*. 2008;65(1):217-28.
- Dixon-Woods M, McNicol S, Graham M. Ten challenges in improving quality in healthcare: lessons from the Health Foundation's programme evaluations and relevant literature. *BMJ Qual Saf*. 2012. <http://qualitysafety.bmj.com/content/early/2012/04/27/bmjqs.2011.000760>. Accessed August 4, 2014.
- Berwick DM, James B, Joel Coye M. Connections between quality measurement and improvement. *Med Care*. 2003;41(1):130-8.
- Sloane T. Paying for improvement. Incentive models need to be refined to reward incremental quality advances. *Modern Healthcare*. 2005;35(50):20-1.
- Rosenthal MB, Fernandopulle R, Ryu Song HS, Landon B. Paying for quality: providers' incentives for quality improvement. *Health Aff*. 2004;23(2):127-41.
- Andersson AC, Idvall E, Perseus KI, Elg M. Sustainable outcomes of an improvement program: do financial incentives matter? *Total Quality Management*. 2013;24(7-8):959-69.
- IHI, Institute for Healthcare Improvement. The breakthrough series: IHI's collaborative model for achieving breakthrough improvement. IHI Innovation Series white paper. Boston: Institute for Healthcare Improvement; 2003.
- Van de Ven AH, Poole MS. Explaining development and change in organizations. *Acad Manage Rev*. 1995;20(3):510-40.
- Antonic B. Organizational processes in intrapreneurship: a conceptual integration. *J Enter Cult*. 2001;9(2):221-35.
- Hackman JR, Wageman R. Total quality management: empirical, conceptual, and practical issues. *Admin Sci Quart*. 1995;40:309-42.
- Deming WE. *The new economics—for industry, government, education*. Cambridge, Massachusetts: MIT Press; 1993.
- Shewhart WA. *Economic control of quality of manufactured product*. New York: D. Van Nostrand; 1931.
- Schroeder RG, Linderman K, Liedtke C, Choo AS. Six sigma: definition and underlying theory. *J Oper Manag*. 2008;26(4):536-54.
- Van de Ven AH. Central problems in the management of innovation. *Manag Sci*. 1986;32(5):590-607.
- Hjorth D. Organizational entrepreneurship: with de Certeau on creating heterotopias (or spaces for play). *J Manage Inquiry*. 2005;14:386-98.
- Nählinder J. Where are all the female innovators? Nurses as innovators in a public sector innovation project. *J Technol Manage Innovation*. 2010;5(1):13-29.

19. Sundin E, Tillmar M. A nurse and a civil servant changing institutions: Entrepreneurial processes in different public sector organizations. *Scand J Manage.* 2008;24:113-24.
20. Mainz J, Bartels PD. Nationwide quality improvement—how are we doing and what can we do? *Int J Qual Health Care.* 2006;18(2):79-80.
21. Rövik KA. Managementsamhället: Trender och idéer på 2000-talet (in Swedish). Malmö: Liber; 2008.
22. Bartlett D, Dibben P. Public sector innovation and entrepreneurship—case studies from local government. *Local Govern Stud.* 2002;28(4):107-21.
23. Kirkwood BR, Sterne JAC. *Essential medical statistics.* 2nd ed. Oxford: Blackwell; 2003.
24. Skytt B, Ljunggren B, Engström M, Carlsson M. Different development programmes—does it make a difference? *Leadership Health Serv.* 2011;24(1):29-50.
25. Gunningberg L, Brudin L, Idvall E. Nurse Managers' prerequisite for nursing development: a survey on pressure ulcers and contextual factors in hospital organizations. *J Nurs Manage.* 2010;18:757-66.
26. Parker L-E, de Pillis E, Altschuler A, Rubenstein LV, Meredith LS. Balancing participation and expertise: a comparison of locally and centrally managed health care quality improvement within primary care practices. *Qual Health Res.* 2007;17(9):1268-79.
27. Mountford J, Shojania KG. Refocusing quality measurement to best support quality improvement: local ownership of quality measurement by clinicians. *BMJ Qual Safe.* 2012;21:519-23.
28. Institute of Medicine. *The future of nursing: leading change, advancing health.* Washington, DC: Institute of Medicine; 2010.
29. Kammerlind P, Dahlgaard JJ, Rutberg H. Leadership for improvements in Swedish health care. *Tot Qual Manage.* 2004;15(4):495-509.
30. Andersson M, editor. *Många Bäcker Små, Fem studier av förbättringsarbete inom Region Skåne* (in Swedish). Malmö University, Evaluation Report 2009:1.
31. Batalden P, Davidoff F. What is "quality improvement" and how can it transform healthcare? *Qual Saf Health Care.* 2007;16:2-3.

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