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Process management in healthcare: investigating why it’s easier said than done

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Abstract

Purpose – The purpose of this paper is to investigate what happens when a new management idea with manufacturing origin is implemented in a healthcare organization. In this paper, it is focussed on process management: what happens when the processes are highlighted, process owners are appointed and more power is allocated to the process dimension of the organization.

Design/methodology/approach – The paper uses the case of a hospital group in Sweden to investigate difficulties in implementing process management. The studied hospital group has been involved in systematic fundamental change to the system for nearly a decade. The research project was conducted using a collaborative management research approach in which academic researchers worked together with the development director.

Findings – The paper shows that the organization itself in many ways becomes an obstacle to the achievement of a process-oriented management style. In the empirical story, voices from the healthcare staff reveal conflicts over organizing principles and structures such as budgeting and reimbursement systems – systems obviously built on a more functional view from an organizational perspective. It is not completely evident that the two alternative perspectives are able to co-exist easily – managing them seems to be an advanced balancing act.

Originality/value – The paper provides an illustration of knowledge transfer from manufacturing to service industries. It focuses on the meeting between a Swedish healthcare organization and the idea of process management.

Keywords Process management, Organizational design, Health services, Sweden

Paper type Research paper

Introduction
Healthcare organizations face increasing pressure to improve their operations and to provide evidence of the quality and efficiency of their organizations (Kujala et al., 2006).

The research reported in this paper was funded by the Swedish Council of Working Life and Social Research. The authors wish to thank the staff at Skaraborg Hospital Group who contributed to this research.
This means that healthcare managers who have traditionally focused on the quality of care are now forced to review their overall management practices for the sake of effectiveness. There has also been criticism of the healthcare system regarding patient safety. An example is the reports from the Institute of Medicine (IOM) (2000, 2001) that have suggested that 58 per cent of the medical errors related to hospital deaths in the USA could have been prevented. The IOM reports propose improvements in healthcare quality systems to resolve these shortcomings from the perspective of patient safety.

In this situation, management techniques that originate from manufacturing have started to spread through the healthcare sector. One example is process management, which has recently emerged as a concept for performance improvement in healthcare operations.

Process management has been a feature of the organizational language in the manufacturing industry for many years. In fact, process management and its associated managerial practices have been described as perhaps the most important management idea of the last 20 years (Cole and Scott, 2000). The notion of process management can be traced back to the evolving quality movement and its advocated shift in focus from product characteristics (i.e. the output) to process characteristics (i.e. how value is actually created in organizations) (Shewhart, 1931). This shift was emphasized further by the next generation of scholars in the quality movement, suggesting that the whole organization should be viewed as a system of processes (Ishikawa, 1985; Deming, 1988; Juran, 1989). With this view as a basis, process management involves concerted efforts to define and map processes; identify bottlenecks and improve; and designate process owners (POs), thus creating a management structure for the value flow that crosses between departments (Benner and Tushman, 2003).

Knowledge transfer from industry to healthcare

It is of course tempting to speculate on the potential of knowledge transfer from the manufacturing industry to the service sector in general and to the healthcare sector specifically. In industry, where decades of competitive pressures have led to the development of methods for improving efficiency and resource utilization, the effects are well documented (Mango and Shapiro, 2001). Although these methods have been developed in an environment where products and not patients are being transformed, studies have shown that the methods can be used in a healthcare setting (Hyer et al., 2003; Lindgaard Laursen et al., 2003; Spear, 2005).

However, these new industrial management techniques have not always been embraced with open arms by healthcare practitioners. A self-image of their organizations and processes being “different” or “unique” may be one explanation for this attitude that forestalls organizational improvements (Yasin et al., 2002). However, there are some features in healthcare organizations that do make them different from traditional industrial organizations. One often mentioned feature is that healthcare organizations are professional organizations (Levay and Waks, 2009). Professionalism is a work organization based on the autonomy of organized expert groups that by themselves decide on the principles and procedures of their activities (Freidson, 2001). A number of studies have shown that, in organizations with professional self-governance, professionals have responded with suspicion to managerial control efforts (Laughlin et al., 1992; Hoque et al., 2004; McGivern and Ferlie, 2007). Hence, the professional organization in healthcare has been regarded as one characteristic that differs from manufacturing and also a
characteristic that is regarded as an obstacle in changes that may decrease professional autonomy.

Previous research on the transfer of these industrial management techniques to healthcare shows that the adoption of the ideas is not unproblematic. In most cases, the new techniques are implemented in a piecemeal approach, rarely delivering the improved organizational performance wished for (Yasin et al., 2002). In a thorough analysis of why healthcare organizations fail in innovation adoption, Nembhard et al. (2009) claim that the organizational members' inconsistent or improper use of the innovation is a primary cause. In their examination they highlight four features of healthcare organizations that foster chronic innovation implementation failure:

1. the nature of their work;
2. the characteristics of their workforce;
3. their leadership relations; and
4. their performance control and measurement systems.

However, these features are not unique to healthcare organizations. What make them unique are the combination, volume and extremity of the features they possess, which makes them more challenging than most service organizations but is also representative of many and is therefore a fruitful research setting (Nembhard et al., 2009).

The purpose of this study is to investigate what happens when a new management idea with its origin in manufacturing is implemented in a healthcare organization. We focus on process management: what happens when the processes are highlighted, POs are appointed and more power is allocated to the process dimension of the organization. This paper addresses obstacles in the hospital setting that in different ways counteract an increased orientation towards the process perspective.

Method
We use the case of the Swedish Skaraborg Hospital Group (SkaS) – a hospital group that has been involved in systematic fundamental change to the system – to investigate difficulties in the implementation of process management. The research project was conducted with a collaborative management research approach (Shani et al., 2008) in which academic researchers from Chalmers University of Technology and Karlstad University worked together with the Development Director at SkaS, who has been involved in the work with process management for several years. This approach created a closer relationship and opened possibilities for mutual learning between the researchers and the “researched”. Consequently, our approach corresponds to a greater extent to the ideals associated with action research than those associated with more positivistically oriented social research, which embraces the notions of objectivity, distance and the need to avoid bias (Greenwood and Levin, 2007). The collaborative management research ambition is instead to contribute to innovative and actionable management knowledge and to provide new perspectives that may reinforce the problem-solving capacity in the local processes (Shani et al., 2008).

To create a learning process for both parties in this study, we held joint dialogues in the defining phase of the project. After an agreement on how and where at SkaS this research study could be conducted, the academic researchers worked independently during the data collection phase and interviews.
Interviews were conducted and data were collected in three units: in the top management team and two divisions. A total of 22 interviews were conducted in these units with managers, physicians and nurses with experience of and opinions about process management. The interviews focused on the respondents’ notion of process management in their local context and each interview lasted 1-1.5 hours. The interviews were then transcribed verbatim. Apart from these interviews, additional data were gathered, e.g. internal newsletters, annual reports, educational material and process documentation.

The data were categorized and anonymized using the NVivo 8 qualitative analysis software. When categorizing the data we sought categories that were frequently mentioned, regarded as important, and of a general character, i.e. not specific to a certain clinic, group of patients, etc. After categorizing the data the two parties were then jointly involved in interpreting the results and making sense of the findings. The approach used is similar to what is called utilization-based evaluation (Greenwood and Levin, 2007), in which the central question is whether the results matter to the stakeholders that are involved.

The case and the context
The SkaS is situated in the Western region of Sweden and serves a population of 260,000. The group consists of four hospitals – the hospitals of Lidköping, Skövde, Mariestad and Falköping. The services offered by SkaS include acute and planned care in 30 different medical specialties. In total SkaS have over 800 beds and approximately 4,700 employees. The hospitals annually handle 41,000 inpatient episodes, 204,000 outpatient doctors visits, 19,300 surgical procedures and 2,300 births. The annual turnover of the SkaS is SEK three billion.

The hospital director is the executive officer of the four hospitals. The hospital group is organized in a vertical structure with four divisions – the divisions of medicine and psychiatry, surgery, women and child care and the Lidköping hospital. Each division is headed by a division manager and has a number of departments – so-called clinics. Each clinic is led by a clinical manager, most often a physician.

In Sweden, as in many member countries in the European Union, most of the healthcare needs of all citizens are provided for by the state, at a moderate cost and at a reasonable resource level, with good accessibility to care and good medical outcomes (OECD, 2007). Care is mainly financed by individual and corporate salary-based taxes. Primary and hospital healthcare are organized at the county level, while after-care services are organized at the municipal level. The economic budgets for most hospitals in Sweden are allocated annually using a purchaser-provider split.

Process management at the Skaraborg Hospital Group
“Process improvement” found its way into Swedish healthcare in the mid and late 1990s (Kammerlind and Kollberg, 2007). As in most Swedish hospitals at that time, process mapping at SkaS was the tool preferably used to solve local problems in care processes. The concept of process orientation was not considered to be an idea with any significant managerial implications but was seen rather as a useful improvement tool. Nevertheless, using process mapping to identify problems in important patient flows often proved successful. The process improvement initiatives resulted in several successful projects, although many outcomes did not prove to be sustainable over time (Eriksson, 2005).
The balanced scorecard (BSC) was introduced as the main management system at SkaS in 2003. The use of BSC shifted the strategic discussion from a dominating economic discourse towards a more balanced dialogue containing patient, process and learning perspectives as well. The initiative can be viewed as a total quality management strategy that focused on customer and process orientation together with continuous improvement (Lifvergren et al., 2007). Concordantly, even greater emphasis was placed on the ability to understand, map and continuously improve the most important care processes of the organization.

A set of new roles was formulated with different responsibilities for the care processes. These roles are still used today. The PO is responsible for the process strategy, e.g. the aims and the results of the process. Every process should also have a steering committee, which is led by the PO and consists of the clinical managers concerned. The steering committee’s main objective is to secure the resources needed for each process to produce its intended results. The process manager (PM) leads the operative process improvement work and reports directly to the PO. Sometimes a process group consisting of co-workers from the process is designated to perform the actual improvement efforts (Lifvergren, 2008).

Six Sigma was introduced in 2005 as a process improvement method at SkaS. For the last three years, many improvement projects using the define, measure, analyze, improve, control roadmap of Six Sigma have been carried through (Lifvergren et al., 2007). Simultaneously, 45 black belts and 200 green belts have been trained. As of today there are 25 PMs/black belts at SkaS working full time with quality improvement. Almost 3,000 co-workers have participated in a two-day white belt course. A recent summary of the latest 23 black belt projects shows a success rate of almost 70 per cent (Lifvergren et al., 2009). However, it is evident in many of the projects that the ownership of the actual processes in which the problems surfaced is still unclear – no PO or PM was held accountable for solving the problems (Lifvergren et al., 2008). Similar conclusions were voiced in a recent regional revision report (Revisionsenheten, 2009). Although 49 processes were said to be in place, the revision showed that the traditional line organization prevailed – outcomes of the economic, patient and clinical perspectives were assessed vertically and not along horizontal, value-creating processes. To overcome the weaknesses identified, a strategic process plan was designed during 2008 (Lifvergren, 2009). The plan is now being implemented stepwise. The core elements in the plan include but are not limited to:

- The development of a generic core process map in which the acute care process, the planned care process and the patient support process are defined as the main processes of the hospital group.
- The appointment of a process director who is responsible for the overall process management at SkaS.
- The appointment of POs for the three core processes.
- A more formalized appointment of POs and PMs in which a distinct responsibility for the development of the process is handed over.
- A comprehensive intranet database in which the results of the different processes are reported every month.
- Iterative learning dialogues with PMs, steering committees and POs of all processes. The dialogues are led by the process director and the development director.
The organization as an obstacle to the idea of process management

In our empirical study of process management at SkaS, we found that the organization itself was often referred to as an obstacle to the idea of process management and its realization. In this section, we use comments made by the respondents to introduce different aspects of ordinary life at the hospital that clash with this new management idea with manufacturing origin.

We noticed that the identity of the employees seemed to be associated with the functional units. The processes did not yet have that strong position, and people in the organization were not used to think about the hospital as constituted by processes. Two different voices from our empirical material:

Physician/Manager: I wish that a manager would say: What processes go through my department? But that’s not what they say – they say: This is my department. And then they give a report about the department. And then you don’t see yourself as a part of a process yet.

Physician/Manager: But it isn’t sure that – if you ask somebody on the floor at the gynaecology department – if they feel like they’re a part of a gynaecological process, they probably say instead that they still work at the gynaecology department.

Identity was closely connected to the avoidance of ambiguity. As human beings, we often tend to choose the more secure alternative. One of our respondents talked about the accountability framework:

Manager: I think it’s the unfamiliarity with working in these processes. We feel secure in this business that, if a clinic is going to take a measure, then we have the instruments; primarily, we have areas of responsibility. Maybe it’s on that level. The responsibility is with the unit managers, or it’s with the head of the clinic. You can demand an answer, so to speak: What happens now? And so on. If you have a process, it becomes fuzzier because more people are involved.

Performance management

Structural elements that hinder efforts that try to enhance a management perspective towards the processes were also evident. The cognitive structures around the functional bureaucracy were for example materialized into systems for budgeting and monitoring:

Physician/Manager: All of the budget is set up at the department level, all reporting systems have to do with the department. It doesn’t have to do with the process. So we have to make it work in some way. We can’t get the results out of the process that we’d like to and we can’t see what it costs in the process today. So both systems are at work – while this system in that direction is alive at the same time, we try to steer it in the other direction.

Manager: I can feel like it’s hard – we don’t follow the economy in the process. It’s not like we enter our invoices, for example – they’re entered at a department. And the process, it goes through the whole – maybe a number of different departments then. And it feels a little like it’s a problem, if you’re going to be able to follow the cost through the entire process.

You can also see that the functional organization rather than the patients needs to determine what you find to be your mission:

Physician: Should we do this? We don’t get paid for it. It has to be put into our report that we go in and help taking blood samples even though the patient isn’t admitted with us. And so on. Things also come in that you have to give time to somehow, finding routines for showing that
you’ve done it, to get scores in your protocol so that you can motivate needing a certain number of personnel.

**Physician:** But, of course, for the personnel at the department, it’s naturally correct in some way that it isn’t a part of their basic work tasks. But the alternative is that we have to admit the child with us. Then it shows. But it means a lot more work, especially when we can’t always get the mother admitted. So I wish that we could get the administrative business to run smoothly and adapt ourselves according to what’s good for the patient, for the mother and child.

One nurse said with a bit of resignation in her voice:

**Nurse:** There’s so much in our follow-up system that’s bad and that’s an obstacle to the improvement work.

Several persons used the example of how the system of counting patients worked. Every patient coming to the hospital could give a unit one score. However, it is obvious that there can be competition between different units working with the same patient:

**Physician:** You know that we have to produce, if I can say that, and then scores are counted for each visit we have and this is registered. […] So when we cooperate we don’t get, as we call it, any score – because cooperation without there being a patient doesn’t give anything.

In the same spirit, we found many examples of when a PO could see a better total outcome if only one of the functional managers could put in some extra resources or took a larger part of the total costs. This can be problematic from a functional perspective. You could say that the functional manager and the PO had different cognitive structures when they evaluated different options:

**Manager:** In a process owner’s perspective it has to do with improving care, that there’s better quality. And in the line it has a lot to do with keeping your budget. So, the process owner can say that we need to do this and that, because the care would be better and it would be better economically – which in fact it could be. But then the person who takes care of the resources that are partly used for this process – but not completely – says for example: But we don’t have any money to employ extra personnel that would do these things.

**Physician:** They used to be sent directly to the surgery clinic where everything was cut away regardless of what we thought had happened. And a lot of this was done down at central surgery, which costs a lot of money. Now we’ve changed so that all referrals for dermatology go to the dermatology clinic and we select what needs to be operated and what is benign and doesn’t need to be operated. And so there are much fewer operations. So in that way we save a lot of money. In that way the surgeons can actually give their time to patients who need it more, who need these operation slots. This means at the same time that some costs have been moved from the surgery clinic to us.

Of course, we also found dedicated people working against these functionally based values. But there are strong forces:

**Physician/Manager:** Yes, it’s hard and we work all the time toward this business with budget control. A question came up the other day when we were talking about processes – because the profit doesn’t come to us but can go to someone else, like in their wallet. But then, that’s sustainable development, isn’t it? We can’t think so short-term. We can, and we do it all the time, but it isn’t economically reasonable. We have to look at the whole picture. And that’s really difficult. This department doesn’t intend to pay for that or that or they don’t intend to do that or that, because they wouldn’t be able to keep their budget. But we have to fight toward that. It’s hard.
The whole issue concerning functionally based budgets and monitoring is reinforced by the logic of public organizations. There are no or few possibilities to increase the amount of money flowing into the organization by working in a more customer-focused way:

*Manager:* And in improvement work and things like that, you can certainly conclude that, but when it comes to economic control in process in healthcare, it’s also very tricky in that we don’t make any money on improved care since healthcare isn’t holding the money bag. If you look for example at sick-leave time, we can create new methods that have as their effect that people aren’t given sick leave for as long a time after an operation, but they’re more expensive. [...] And it’s a cost that I get hit by as the head of the department. That the patient can start working again earlier – I don’t get anything back for that. Since as things are now I don’t need to pay for an operation, I don’t actually have any economic incentive to take away operations. I do it anyway. But in industry you have a sales volume in some way and you can sell more cars in the best case and get the money back. That’s a problem for us.

*Manager:* But on the clinic level, we have our frame budget. It’s a historical budget that’s counted up a certain percent, and it’s done each year, so that it’s also a kind of savings requirement. So if I perform more operations of a certain type or perform them with other methods that are technically cheaper, so to speak, I can’t make any money on that. The only thing I could do as head of the department so that the budget could be better is to do things with fewer personnel.

*Administrative routines and hospital design*

There are other kinds of systems that do not support the idea of following the pathway of the patient. Many respondents state that administrative systems and the information technology structure at the hospital are built upon different logic:

*Physician:* Then of course you run into the thing for example that it’s different clinics and administrative routines, records systems that can’t communicate with each other and so on. And you experience these things as hindrances, as stumbling blocks in a process that you want to work as simply and smoothly as possible. And these things suddenly pop up. But what should we document – if we move the child after two days, the documentation doesn’t follow it and so on. And it’s those kinds of irritating hindrances that you have to work with – unfortunately it’s very seldom possible to change them.

*Physician:* We have a system at the children’s clinic that’s called Melior and at the women’s clinic there’s a system called Obstetriks, and they can’t communicate with each other, so there isn’t much I can do about that. That’s just the way it is.

Even the way the hospital is designed can be an obstacle when it comes to process management:

*Physician/Manager:* For gynaecology, there I want outpatient care and inpatient care to be integrated. [...] If we had it on the same floor you could take care of the whole process and be closer to one another. We think that it would make the feeling of participating in a process easier at least, that you see the patient through the care process, so to speak. But then comes a counter-requirement that says: No – maybe that can’t be done because the company that owns the property thinks that we should have standard departments. So we don’t want to build departments that support the women’s healthcare process but we want instead to have a department that looks alike – so that we want to have the departments there and the outpatient clinics there. So I get the feeling that there’s also a conflict here between process thinking and a, like – they’re actually fortifying the silo phenomenon.
Concluding discussion
It is evident that the empirical story of process management at SkaS illustrates conflicts over the organizing principle. When the process perspective has been highlighted, process maps have been drawn that illustrate how value for the patients is created. When special roles such as POs have even been assigned to coordinate processes that cross between many different departments, it becomes clear that process management cannot be seen as an isolated phenomenon. It must adjust, and be adjusted, to its managerial context.

F.W. Taylor composed his ideas about scientific management in 1911, where observations and monitoring on the shop floor were basic elements for finding optimal operations. About the same time Max Weber wrote his most famous work on bureaucracy. According to Weber, bureaucracy has a technical superiority over all other forms of organization. As an ideal type it includes formalized, rule-bound hierarchical authority, standardization and specialization with a clear functional division of labour.

However, even management scholars like Mintzberg admit that hospitals are extraordinarily complicated organizations – not when considered one element at a time, but when they are embedded in an organizational and social context (Glouberman and Mintzberg, 2001a). Their main explanation for this complexity is that healthcare is differentiated into four different worlds and therefore also four ways of organizing – a differentiation that is also noticeable in the voices of the staff interviewed at SkaS. Glouberman and Mintzberg (2001a, b) deliver a model that complements the Nembhard et al. (2009) description of unique characteristics of healthcare organizations. Glouberman and Mintzberg distinguish between cure, care, control and community, where cure equals doctors, care is delivered by nurses, control is practiced by the conventional administration and community is represented by the trustees of the hospital. The story from SkaS where frustrated voices criticize the misfitted management and control system is a good illustration of what Glouberman and Mintzberg call the horizontal cleavage that separates those who operate clinically (doctors and nurses) from those who do not (managers and trustees). The first group is those who respond to professional requirements, while the other group is those sensitive to the needs for fiscal control. Consequently, the organizing principles become different in these separate worlds. What seems to be lacking in this particular context might perhaps be the timing between the vertical and the horizontal principles. Co-workers may have spent years mapping and improving processes and have little patience left for the slowly developing administrative functions that prevent further process improvement.

The control and administration in healthcare organizations typically act like an administrative hierarchy. It is important to note that coordination of actions in these professional bureaucracies is based more on standardization of skills and knowledge rather than standardization of work processes; see, e.g. Levay and Waks (2009) or Freidson (2001).

Prescribed and standardized ways of working are rather unusual; instead professional groups, not least physicians, with common education and skills act as the guarantor for the coordination within the functional units of the organization.

Bureaucracy has on the other hand weathered lasting and relentless criticism for being (among other things) too hierarchical, inefficient, big, lazy and wasteful. A discourse has been held since the 1970s introducing post-bureaucracy forms, and we could easily regard the ideal type of process management as one such initiative
Instead of the internal focus on hierarchical and functional organization, the customer and the horizontal value chain come into play. In our empirical study of the SkaS group, we find the post-bureaucratic rhetoric to be in place. Many of the respondents are very familiar with concepts such as process, value chain and customer. A notable finding in our study is the absence of the expected critique against the manufacturing heritage of process management and the industrialized vocabulary it carries with it. Only a few respondents made remarks concerning any misfit of process management in a service or healthcare setting, and then mainly on a practical and not a principal level. This was especially true for the nurses. Glouberman and Mintzberg (2001a) give one explanation for this when they emphasize that it is the nurses who run the wards and provide care on a rather continuous basis. This makes the operating workflows their organizing principles. In fact, often no one is formally in charge of coordinating many of the activities along the patient pathways that run across a hospital. But nurses do come closest to effectuating it. Consequently, process management seems to fit well with the nurses’ perspective on their own job, and new roles as POs may fill a gap in the coordination of hospital operations.

At the same time, it is obvious that bureaucracy is still present and in itself acts as efficient resistance to the new ideas. This presence manifests itself in the form of intra- and inter-subjective cognitive structures as well as in materialized artefacts. In the empirical section we used citations to describe how the professional identity still seems to be related to the specialty/functional units rather than to the processes. The materialized artefacts that are reminders of the traditional organization are numerous, from the most obvious such as organizational charts and buildings to more sophisticated ones such as systems for budgeting and reimbursement systems.

It is evident that the organization itself in many ways can become an obstacle to the achievement of a process-oriented management style. Like all structures, after they have been developed, firmly established and institutionalized as “our way of working”, they also become barriers that hinder new ways of organizing. It is a huge challenge to change all these cognitive and physical items in order to make the idea of process management feel comfortable. Glouberman and Mintzberg (2001a, b) argue that if the four worlds they distinguish in healthcare remain disconnected – community, control, care, cure – nothing fundamental will change. Naturally people in an organization ask the question of whether the gains will exceed the losses. Will the benefits of process management be enough to balance all these hours of mapping and changing systems?

Managerial implications
The resistance that seems to emanate from the organizational structures at SkaS is not surprising and is probably of a good nature. There must be a considerable risk that the bureaucratic baby is thrown out with the bathwater. Obviously, the traditionally bureaucratic way of organizing healthcare includes many good things. Among those we can mention the professional learning going on within the medical specialties/functional clinics. Specializing has been one of the cornerstones in healthcare organizations for decades, and some division of labour must exist. If process management is too easily adopted in, for example, a healthcare setting, values such as professional specialization could be damaged.
We could on the one hand argue that the ongoing course of events at SkaS can be seen as an adjustment where the dominant paradigm has not yet changed in any dramatic way. We could attribute this to many functional mechanisms regarding the control dimension of the organization, such as budgeting and reimbursement systems that are still present in the organization. On the other hand, many of the voices presented in the empirical part of our paper could be interpreted as frustration, particularly on the part of those who operate clinically. This frustration over old-fashioned structures could not have been present without a developed understanding of the process management idea. One would probably not notice the hurdles without a change in mindset.

If the organization continues along this path it will certainly find new ways to look at work and get the possibility to alternate views. The functional/vertical perspective could be complemented by a horizontal perspective based on the pathways of the patients. This could lead to a reduced risk of suboptimization because of a too narrow view of the functional parts of the processes. It could also offer a possibility to patients to influence the future healthcare organization.

There is however a small hitch. It is not self-evident that the two alternative perspectives can easily co-exist. In the same way, the matrix proponents of the 1970s had to realize that the stage could be too small to include several alternative views; the idea of process management may face trouble when it challenges the bureaucracy. When the focus is on the horizontal dimension and new roles such as POs are appointed and new ways of managing and monitoring the processes are developed, ground is added for new conflicts. Managing a post-bureaucratic healthcare organization seems to be an advanced balancing act between different ways of organizing, where the timing has to go hand in hand between the vertical and the horizontal to avoid wasting organizational energy.

In this paper, we have focused on the transfer of knowledge from manufacturing to the service industry. As a concluding remark, we wish to point to the fact that knowledge transfer also goes in the other direction. Many companies in manufacturing industries today look upon the advantages of services but are struggling with the changes these require as regards the offering and the organization. In all likelihood there will be future special issues that follow that transfer as well.

References


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