

This book is one of the results of a long-time, multidisciplinary research engagement in healthcare catalysed by the Leading Health Care initiative, taken by the Stockholm School of Economics' Executive Education and Economic Research Institute. Leading Health Care contributes to the transformation of global and national health systems by bringing together a broad range of key actors in the health and life science sector, thus combining practice with academia. Together with our partners, we conduct high-level dialogue on challenges and solutions, provide thought leadership, and disseminate research-based knowledge as well as genuine experience about how health systems can be improved.

We are dedicated to the venture of developing national and trans-national healthcare systems that are more effective, efficient, and innovative than those of today, in terms of both resource use and patient health outcomes. This is crucial, because tomorrow's health systems need to be economically viable for traditional welfare states with aging populations, as well as for developing regions with populations that have vast, currently unmet healthcare needs due to systemic flaws and/or resource shortages.

Our book offers no ready-made solutions, but rather aims to better formulate the questions asked. Some of the questions asked are: What can healthcare learn from other sectors? Why has not IT yet lived up to its promises? How does patient focus work in real life? Does today's ways of financial control work with or against internal goals? What is evidence based management? What kind of market is healthcare? We strongly believe that if we ask ourselves different questions we also reformulate the key problems. Thereby we can create new areas for reflection and action, so that the strengths we know exist in all organizations can be used to develop new values in healthcare.

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Leading Health Care – Organizing healthcare for greater value Hans Winberg, Jon Rognes & Claes-Fredrik Helgesson

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IFL EXECUTIVE EDUCATION



EFI THE ECONOMIC RESEARCH INSTITUTE

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Leading Health Care – Organizing healthcare for greater value

Hans Winberg
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(editors)



IFL EXECUTIVE EDUCATION



EFI THE ECONOMIC RESEARCH INSTITUTE



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EFI Mission

EFI, the Economic Research Institute at the Stockholm School of Economics, is a scientific institution that works independently of economic, political and sectional interests. It conducts theoretical and empirical research in the management and economic sciences, including selected related disciplines. The Institute encourages and assists in the publication and distribution of its research findings and is also involved in the doctoral education at the Stockholm School of Economics. At EFI, the researchers select their projects based on the need for theoretical or practical development of a research domain, on their methodological interests, and on the generality of a problem.

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Foreword

Since its founding a hundred years ago, *Stockholm School of Economics* (SSE) has actively addressed the area where science and business intersect. This book is the result of a concerted effort by two central actors in the SSE Family: one being the *Economic Research Institute* (EFI), which holds a strong position as a research institute with its many active and renowned researchers found in our more than 20 research centers within a broad spectrum of economic and social sciences; the other being *IFL Executive Education*, which for over 40 years and in close collaboration with our high-profile professional partners in many industries as well as from wider society has transformed academic findings into practical benefits and also has emerged on the world forefront in continuing education.

Leading Health Care is a newly formed academic think tank where we unite around the ambition to achieve tighter transfer of knowledge between research and practice as well as across our many academic disciplines. It is our conviction that a reciprocal dialogue among different actors around relevant and timely topics will promote development and benefits to our society. Not least, we need to further the advancement and transfer of knowledge in the complex and dynamic social sector that constitutes healthcare and all its ramifications.

We would like to thank everyone involved for their enthusiasm and desire to contribute to the effort behind this book project and the think tank. Not least we thank our professional partners in *Leading Health Care*. Without your support this work would not have been possible. We look forward with anticipa-

tion to the results that can emerge as the dialogue matures and new projects are conceived and implemented. Our pledge is that we will remain receptive to new thinking, and that we will share our knowledge.

Stockholm, September 2009

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About Stockholm School of Economics IFL Executive Education

Stockholm School of Economics IFL Executive Education is the Nordic region's leading provider of executive education and is represented in Sweden, Norway, Finland, Russia, and the Baltic States. Although Stockholm School of Economics IFL Executive Education is based in the Nordic region, its international experience makes it a global provider of development programs.

A profile feature of Stockholm School of Economics IFL Executive Education is the way it integrates general management programs with state-of-the-art expertise in the areas of leadership, business development, finance, and economics. Every program has been created to meet the particular challenges facing business, administration, and leadership in different types of organizations – in the private and public sectors alike.

IFL's teaching processes are based on a combination of research and experience-based knowledge that always begins with the client's practical challenges and dilemmas. IFL's programs yield real effects – in both the short and long term.

The Financial Times ranks Stockholm School of Economics IFL Executive Education as the top Nordic provider of executive education. We are also ranked as one of Europe's top providers of tailored programs for corporations.

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Editors' preface

This book is an outcome of the Leading Health Care initiative. The first edition in Swedish has received considerable attention in the Swedish healthcare sector, as well as in the public debate. As a result, a second edition, in English, which you hold in your hand, is published.

All the research presented in this book is based on fundamental organizational analysis – of processes, actors and relations. Understanding the elements of organizing, managing and governing have central implications for developing tomorrow's healthcare systems. Consequently, you will find not only facts and figures, but also more profound ideas about the basis of how we structure our world. We believe there is a tendency to overestimate the value of structural reform, and hence overlook surrounding mechanisms and resistances that reside in all contexts.

There are more healthcare systems than there are countries, and all are unique in some way. We aim to bring out general issues that are important to all systems and all societies and focus on similarities and common issues rather than local specific problems. In that way we may generalise from specific examples, or in this case from the Swedish system, and bring forward areas that are general and of interest to all. We look at how money enters the system, how care is paid for, how the overall system is put together, how care is produced and how the patients fare in the system. As an advice to the reader, we want to stress that this is NOT a book about Swedish healthcare, but a book about understanding healthcare everywhere,

bringing forward important issues for discussion, and analysing underlying mechanisms and positions.

When this is said, we must stress that all action is local, and that there are no blue prints that can be copied without at least some effort to translate them to local circumstances. All good practice is context specific, but we still believe that there are some general principles that may apply. This book is not a map or a best practice manual, but rather an instruction on how to navigate in a messy environment. What is important, how do things interact, why is A influencing Z in the way it seems to?

Bringing together stakeholders in dialogue creates mutual understanding and increases the chance of finding solutions which challenge and improve established structures and rigidities. This is why Stockholm School of Economics IFL Executive Education and EFI (the Economic Research Institute) started Leading Health Care. In LHC we put knowledge and interest to the test through dialogue rather than negotiation.

Leading Health Care is a unique constellation where all players in the sector can be part of an open platform where we try out ideas regarding the healthcare of the future. We put our research experience at disposal, as well as the extensive experience of working with executive development. Members are authorities, companies and administrative units within healthcare, suppliers of pharmaceuticals, technology, service and logistics etc. to the healthcare sector.

Leading Health Care strives to aggregate, analyse and disseminate knowledge on healthcare management. Leading Health Care does this by bringing all interests together in an arena for discussions, by publishing cases, reports and books, and by presenting knowledge in workshops to members and to society.

We are now going global, with partners in the US, in India and having discussions with several others. One recent initiative from Leading Health Care is a cooperation between Swe-

den and India on healthcare management. Sweden has a well developed healthcare system that covers the entire population. Still there are significant potential to improve the efficiency of healthcare delivery through new ways of working. India, on the other hand, has a less developed healthcare infrastructure, but is at present trying out new and innovative ways of organizing and delivering healthcare to the population. Leading Health Care aims to identify new and innovative practices, and spread the knowledge and utilisation of these, at first between Sweden and India, but also globally on a North-South dimension. This gives us a possibility to learn between the two systems, and to exchange knowledge about successful ways of working and organizing healthcare.

Collectively the authors of this book have long experience in meeting with executives and staff in the healthcare sector and have conducted solid research in this field. The contents of this book did not emerge from a fleeting whim, but from years of involvement and interest in the complexity of the challenge. Meetings with participants in IFL Executive Education programs throughout the years have provided important input and guided several people into the area. In this context we would like to thank Professor Bengt Jönsson, who is largely responsible for giving each of us who worked on the book the opportunity to meet with many active practitioners. Bengt not only advanced the research field of health economics, but he was also the driving force behind our extensive continuing education program (now in its third decade) for leaders and key players in healthcare. Thank you!

Throughout the journey leading to publication of this book we have held the conviction that different actors create more value together than alone. This also applies to the editors of this book, with our different profiles, interests, and potential strengths, just as we believe it applies to different interests in the sector: corporations and agencies, purchasers and provid-

ers, reviewers and researchers, clinicians and administrators. Further, it applies to our colleagues who have all generously contributed with findings from their own research projects. Each author has written independently, and each of us presents our own respective area(s). It has been an honor to work with each of you. We are grateful for the enormous enthusiasm you have committed to this publication. Thank you!

Books must also be produced. The Economic Research Institute (EFI) and IFL Executive Education have been essential to the production of this book, and we are grateful for their support. A special thank you in the intense final phase of the first edition goes to Anna Tedenfors, previously a colleague for many years at IMIT in Stockholm School of Economics, who has kept a steady hand on guiding the editors and the co-authors, making it possible for you to hold this book in your hand today. Thank you! And to Maria Norrlander at IFL who put her forceful hand over the translation process and made it possible for us to have a wider audience, since Swedish still does not qualify as one of the larger language groups of the world. Thank you!

We can contribute with our perspectives and stimulate new questions that lead to new answers. But we do not have the answers. Without an ongoing dialogue with different representatives of the various interests in the sector our findings would quickly become mute. For support and challenging discussions we thank the partners of *Leading Health Care*. we could not have done this without you. Thank you!

Stockholm, September 2009

Hans Winberg, Jon Rognes and Claes-Fredrik Helgesson

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“ *Discourse on the design and function of health services has become increasingly polemic – a polemic that has placed the distribution of resources in the spotlight: Who is best suited to manage the money? More important is to put a premium on creating value: Who creates the most value for the money?* ”



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A new area for reflection and action

We want to shift the debate and hence reality

Sweden has one of the world's best healthcare systems – at least if we believe renowned American researchers who have shown an interest in us. Nevertheless, the Swedish debate on healthcare continually points to the weaknesses in Swedish health services – health services are unmanageable, costs are too high and out of control, or advances in technology require changes, even in services that function relatively well today. We focus on citizens' demands for greater accessibility, while at the same time many defend the idea that health services should be driven by need rather than by demand. The debate in Sweden does not differ substantially from that in most of the other so-called 'developed' countries.

It's easy to get lost among conflicting problems and positions. Discourse on the design and function of health services has become increasingly polemic – a polemic that has placed the distribution of resources in the spotlight: Who is best suited to manage the money? More important is to put a premium on creating value: Who creates the most value for the money? We suggest that the debate not only gives a fragmented impression, but in several respects it also inhibits the development of health services. Hence, with this book, we hope to change the way that people talk about development in the healthcare sector. Our book offers no solutions to key

problems, but aims to better formulate the questions. Questions that can reformulate the problems so the strength that we know exists in all organizations can be released and used to create new values.

Current debate obscures important issues

Debates on topics as important as healthcare can and should be spirited – but they should be spirited for the right reasons. They can be spirited because they give politicians distinct profile-shaping issues. They can also be spirited because they help industry develop good products. They can be spirited because they help the medical professions defend their positions. Special interests and fixed positions seldom lead to an open and future-oriented debate. Our aim is to add fire to the debate on developing health services as a value-creating system. Why is this debate needed? Unfortunately, a spirited debate that serves one purpose can impede other purposes.

A central point of departure for this book is that the debate on health services is, in many respects, characterized by fixed positions. We suggest that this has two important consequences. First, it overshadows the key issues, which inhibits any debate of real importance that could promote the development of health services. Second, fixed positions lock in our assumptions of what is possible in further developing the sector. In our view, several established dividing lines limit our common ground for reflection and action. This book intends to shift the debate away from preconceived notions. Hence, we aim to help advance the debate on healthcare by presenting perspectives and concepts that create new grounds for debate, reflection, and action.

We aim to promote development in Swedish healthcare – and beyond

The authors who have contributed to this book are all active researchers at Stockholm School of Economics. We represent several different subject areas within economic sciences. Hence, we work with different methods and under different theoretical traditions. What unites us is our long-term involvement and interest in issues concerning leadership, organization, and management in healthcare. Each of us, from our different perspectives, has extensive research experience related to health services. For years, many of us have conferred with healthcare decision-makers through the school's continuing education programs (SSE IFL Executive Education), discussing various aspects of leadership, organization, and management in healthcare. While this book has deep roots, it is also the result of a fresh initiative. Only recently did we, the contributing authors, come together to begin a serious dialogue concerning our research in this area.

This book is also a product of the academic think-tank *Leading Health Care* founded at Stockholm School of Economics. Similar to our research colleagues at other higher education institutions and in other disciplines, we recognize that our core competency lies in developing powerful perspectives and formulating strong questions. It is seldom a good idea to ask researchers if one is looking for simple solutions and answers. That also applies to us. We aim to contribute to healthcare by exposing hidden areas for action. By providing some of the needed tools to leaders at different levels we aim to give something back to the field that has been, and continues to be, so stimulating to study.

It is not the problem that obscures

Popular dividing lines and topics limit our actual grounds for reflection and action in the healthcare debate. If the current debate conceals important aspects, then why does it look like it does? One important aspect is that it helps clarify the identity of various parties. A major benefit of refining and polarizing is that it helps clearly distinguish those who are for something from those who are against. In other words, distinct areas of conflict are functional in the sense they create clear identities among the different actors. And in intense battles a clear identity is essential to be heard above the noise. Even the title of our book flirts with this sign of the times.

There is also another important reason why the debate gets bogged down in polarizing issues, e.g. public versus private delivery of health services or the number of county councils that Sweden should be divided into. By engaging in polarizing debates on problems that are solvable, in principle, one elegantly avoids the much more relevant problems that are too complex for simple, principle-based solutions. Polarization gives the participating parties clear identities and helps avoid the real and difficult issues.

Lengthy reflection is not needed to understand that many values are in play every day in healthcare, and that often they must be weighed against each other. We also know that, in practice, health services solve problems on a daily basis, e.g. through *de facto* prioritization. Given that healthcare by its very nature involves many values, and weighing of values, it is striking how seldom these aspects arise in the public debate. This is not by accident. A polarized debate across a popular and simple dividing line serves as a shield against more important, but much more difficult, questions. Consequently, the debate is often shaped by the obvious benefits of battling across simple dividing lines. We find much less discussion on the incredibly

important and difficult issues of how to use finite healthcare resources in an optimum way when addressing much greater healthcare needs. Even in the absence of solutions to such questions, in our opinion it is the lack of will, or perhaps the inability, to take problems seriously that inhibits progress – not the problems' inherent insolvability.

What can different research perspectives contribute with?

Since business administration belongs to the social sciences, it is hardly surprising that the field shares many characteristics with social sciences in general. Research in business administration, however, might be perceived as fragmented. As with social sciences generally, the different subdisciplines in economics can find it difficult to reach broad consensus across research groups concerning how to interpret a given phenomenon. (It can also be difficult to reach agreement on how to interpret an apparently clear-cut phenomenon.) Consequently, different research groups can be working in parallel with clearly conflicting theories and methods to study identical, or at least similar, phenomena.

However, there are values other than agreement and clarity that can be important in research. Another dimension by which to value scientific activity would be based on its ability to offer viable methods to consider and relate to a fundamentally ambiguous reality. Here we believe that the coexistence of several different ways to consider and interpret reality, which characterizes economic research, constitutes a strength rather than a weakness. Multifaceted scientific activities can be described as multi-paradigmatic. Within separate perspectives (paradigms) it is easier to formulate tools, concepts, and conclusions that remain within the framework of assumptions and

views stipulated by the perspectives. In pursuing the truth, strength does not lie in the conclusions produced within separate perspectives, but rather in a well-developed ability to formulate a way to consider different problems.

All in all, this accentuates that strength does not lie in the ability to create theoretical consensus and irrefutable conclusions. Strength does not lie in an ability to establish Archimedes-like fixed points by which to move the world with a lever. The strength of a multiparadigmatic scientific organization comes from providing a rich toolbox of concepts and attitudes to understand and act in a multifaceted world. Instead of serving as a fixed and stabilizing point, we find that research can have value by being destabilizing. In this case, we want to destabilize several well-established dividing lines. In addition we can also use that which is a core strength in our scientific pursuits. By contributing with concepts and ways to understand we can contribute toward exposing hidden areas for action.

Another answer is also possible – an answer related to several of the dividing lines that we believe limit the debate on healthcare. For the past 10 to 20 years, various concepts and perspectives that clearly relate to the economy have colored the debate surrounding healthcare. Concepts such as efficiency, cost, reimbursement systems, operational design, public, private, market-oriented, and competition have rapidly become prominent in the vocabulary used to manage and debate services in the healthcare sector. As economists, we are already involved in how the debate's distinct dividing lines are drawn and how health services are managed. Hence, when we find it necessary, we also believe we have an obligation to try to shift the debate. Not least when sensible and less-sensible arguments and actions can be grounded in concepts such as efficiency, cost control, or market-orientation. Accordingly, we have presented the way that we as researchers perceive how we

can contribute value to health services. Rather than offering simple answers, our discourse with various actors in healthcare can contribute concepts and perspectives that advance the discussions and point toward new opportunities. This is the idea behind the academic think-tank *Leading Health Care*, and it is also the idea behind this book.

New questions require new answers – contents of the book

Pär Åhlström and Jon Rognes, both active in the field of operations management, describe how the healthcare sector can learn from the industrial sector. In the authors' view, it is not a matter of supplying more resources or changing healthcare services, which are often delivered well – it is more about doing the right things at the right time. It is not about performing surgery faster or making beds quicker, but about organizing activities more efficiently for the patient and the organization.

In the following three chapters we take three different approaches to address the broad area of information technology (IT) and infrastructure in healthcare. Magnus Mähring and Niklas Källberg begin with a review of IT projects, reporting that despite the attention given to IT issues we still focus on symptoms and too little on the underlying causes of problems that hinder breakthroughs with new technology. This concerns risk assessments, project evaluations, and media coverage. The authors believe the problems will continue until the parties involved acquire a deeper understanding of the transformation process that converts IT resources into organizational effects and patient benefits, and until this understanding influences attitudes and approaches toward IT-related organizational development.

Next, Carina Beckerman reflects on some of the difficulties faced when attempting to change organizations to harmonize with the new opportunities offered by technologies for managing and monitoring health services. She reports that we often forget to ask the most important questions in relation to change processes, in this case: What is a hospital, and why does it look like it does? Must a hospital look like it does? What is actually an information system comprised of, and how can it be used? Instead of questioning different phenomena and turning them inside out, we continue to think and act as we always have – even when our real intent is to change and improve.

Ulf Essler then asks the question: Who, in fact, puts the pieces of the healthcare puzzle together – the care producers or the citizens/patients? In asking people to define value, different people give different answers, e.g. monetary value, valuable objects, human value, and valuable memories. Ulf discusses value in relation to the process where patients and providers interact with each other. Value is not what the producers put in, but what the users take out.

The key to putting the puzzle together – which was already alluded to in the chapters on operations management and IT – is clearly highlighted in Johnny Lind's and Kalle Kraus' contribution on economic management. The authors emphasize that we cannot continue to assemble the healthcare puzzle by focusing only on its individual pieces – we must also focus on the glue that holds them together. Hence, a major challenge facing health services is to improve horizontal management, which involves collaboration in different forms as a complement to important vertical – economic – management.

Up to this point in the book we have focused on issues relating to the organization, leadership, and management of organizational processes – normal targets that command the attention and responsibility of organizational leaders. In the healthcare sector, however, much of the content of services

that leaders manage is formulated and regulated outside of the organizations and units that operate these services. A wide range of regulations, professional expertise, norms, and political ambitions affect not only the professional delivery of care, but to a high degree even the management of care. In the chapter on markets and evidence based management the book's focus moves beyond organizational boundaries.

Karin Fernler, Ebba Sjögren, and C-F Helgesson discuss the relatively uncontroversial ambition to apply scientific evidence in managing healthcare. They draw the conclusion that attempts to apply evidence based management are, unavoidably, attempts to achieve concurrence among different facts, changing values, and potential conflicts. The problem is that it is simply not possible to create idealized contexts where contrived value- and conflict-free evidence can rule. To meet future challenges, health services must exercise caution in trying to link evidence based management to other management systems. However, the authors concur with an official report and are convinced that it is reasonable for health services to apply the "methods, interventions, and treatments shown to have the most favorable expected outcomes".

C-F Helgesson and Hans Kjellberg present a new way to analyze markets. They take a pragmatic view toward the effects of market solutions rather than a view that promotes a polarizing debate. Two central assumptions serve as the basis for this pragmatic position. The first is that every type of economic organization generates external effects beyond those desired (and intended). This applies regardless of whether the economic returns are coordinated in a market with perfect competition, through a planned economy, or within the framework of long-term trade relationships. The second assumption is that the introduction of a market, or market-like organization, in a particular sector of the economy does not automatically have a particular effect. We do not view markets as organ-

izational solutions that automatically solve problems without creating new ones or that always create more undesirable than desirable consequences.

In the concluding chapter, we return to the need for a dialogue on values in healthcare. The continually re-emerging hope is that we can find a solution to resolve all conflicts involving goals and values. Based on extensive research and empirical observation, in this book we describe various reasons why debates about tools tend to overshadow debates about values. Since debates about tools often get bogged down in technicalities, they steal the focus away from discussions about values. Discussions on values cannot be “won”, but they are extremely important – one could say valuable. We hope that you enjoy, and benefit from, reading this book.

“*In our view, it is not a matter of supplying more resources or changing the services that are often delivered successfully today, but it is a matter of doing the right things at the right time. It is not about operating better or making beds faster, but about organizing activities more efficiently to serve the patient and the organization.*”



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How can health services learn from the production management of others?

Health services have (operations) problems

Resource consumption by health services is increasing everywhere. Population grows and becomes older, the need for treatment and the number of options steadily expands. At the same time money is limited. Debates concerning how to improve health services in the future often include the view that resources are the problem: “Give health services more resources and the problems would be solved”. In contrast, we believe that health services have a fundamental organizational problem. It is generally accepted that the production of health and social services could potentially improve. However, it is important to start from the right end. We argue that redirecting resources to the sector without addressing its organizational problems would create the risk of exacerbating current problems rather than solving them.

The resource distribution argument becomes increasingly difficult to defend if we gaze into the future. Western nations face major challenges in offering a reasonable level of health and social services to a growing and aging population. More knowledgeable and demanding patients, new treatment methods for severe diseases, and an increasing share of the population in the older age groups lead to a projected increase in

resource consumption of 50% in some countries during the next 25 years. Hence, it will become increasingly important to address organizational issues in attempting to improve efficiency and productivity in healthcare. Given the current financing system and tax levels, the system will be unable to finance health and social services in the future unless efficiency improves.

Efficiency and quality form the core of operations management. Core knowledge centers on how to best design, manage, lead, and improve the organization to achieve the highest possible quality at the lowest possible cost. Experiences gained from developments in other sectors indicate that new approaches in working with operations management have contributed toward substantial improvements in both quality and productivity.

There is every reason for health services to try to apply, if possible, the knowledge and achievements that have been gained in recent decades. Many worthwhile projects throughout the healthcare sector have applied new conceptual approaches in producing health services, recently often in terms of the *lean production* philosophy. But still much remains to be done. In our view, it is not a matter of supplying more resources or changing the services that are often delivered successfully today, but it is a matter of doing the right things at the right time. It is not about operating better or making beds faster, but about organizing activities more efficiently to serve the patient and the organization. How then can health services learn from others? Industry has wrestled with the same problems for more than a century and has made considerable progress.

Other sectors have progressed farther

Our point of departure is that healthcare and social services can be improved by applying knowledge from other types of organizations. For decades, industry has faced a competitive situation that has mandated process improvements and management philosophies whose effects on organizational efficiency and resource utilization are well documented. Using lessons learned from other organizations we could improve several dimensions of health and social services without supplying more resources. Philosophies and methods of organizing activities rooted in industry can be applied to health and social services where care-related services, not physical products, are being produced.

Our studies of health services strongly suggest that substantial efficiencies can be achieved through organizational creativity – several projections suggest an effect of 15% to 20% in successful projects, which is also a common figure in industry. Improvements make it possible to treat more patients sooner – and with higher quality in the care processes. Trials that have applied industrial principles have been able to improve patient throughput and reduce queuing times, which yields a quality effect for the individual and society alike. The individual suffering and societal costs resulting from insufficient access to care can hardly be overstated.

The question, however, is *how* can these philosophies be applied. Clearly, philosophies and methods for process improvements need to be modified to adapt to the environment that characterizes health- and social services. But the problem is that the organization, and primarily the management, of health services today renders it difficult to introduce the necessary organizational changes and slows down the effects of implemented changes.

Lean production is currently one of the most frequently applied industrial concepts. The concept is timely, and seminars on the topic attract numerous participants from health services. Several healthcare organizations have started to work with the concept. Although the concept's popularity is undisputed, what is less obvious are the modifications needed to adapt lean production to health services, mainly how to do it. What adjustments are necessary due to the somewhat unique production logic of health services, and what are the obstacles against achieving the same improvements that have succeeded in certain industrial sectors in recent decades?

Production management – Lean Production

To illustrate the difficulties in improving production efficiency in healthcare we have chosen to explore the example of lean production. This is a comprehensive philosophy addressing how to manage the production of goods and services in the best way possible. Lean production has reached a wide audience and has attracted the interest of health services, as we illustrate by several examples. For purposes of this discussion we need to briefly review what lean production means.

The concept of *lean production* emerged in the mid 1980s from a global research project concerning the world's automobile industry. The project addressed the key question concerning why the Japanese automobile industry held such superiority over its American competitors. The answer was called "lean production" or simply "lean" and was shown to offer the potential to produce cars of twice the quality with half the resource inputs. Further, it was shown that these effects could be achieved outside of Japan. It was the organizational principles, not the countries, that were most important. The approach toward work developed at Toyota in Japan after the Second

World War was the keystone in these organizational principles. This approach toward work comprises the foundation in what came to be known as lean production.

Since the coining of the lean production concept, it has spread to many different sectors and has been interpreted in many ways. Consequently, lean production has not one, but many, interpretations, rendering it difficult to define the concept exactly. But we have made an attempt to do so.

Lean production is based on several key principles: the organization can achieve *continuous improvement* by working to *involve all employees* in attempting to *eliminate waste* in the organization. Organizations achieve this through structured, standardized work toward common goals, through input and feedback, and through continuously improving organizational processes.

Management must therefore design production systems and processes correctly, create appropriate incentive structures, and build the right values into the organization. The work of middle managers includes accessible and visible leadership, delegating responsibility and authority, and involving all employees. It is also important to work with quality improvement systems and to create focus through local measurement, follow-up, and feedback. For employees, this means working with clear, and common goals, using methods to perform important tasks that are independent of the individual performing the task, working to improve quality in daily activities, and focusing on the customer/user. Below we describe some of the most important principles in greater detail.

For senior management

Processes and flow orientation

An important aspect of lean production is to view the organization as processes instead of individual activities or depart-

ments. The advantage of thinking in terms of process instead of activities is that the focus shifts to the final results produced rather than on the efficiency of individual actions. Flow orientation means focusing on the entire production flow, not only on optimizing smaller steps in certain departments. Optimizing particular subprocesses could, in some cases, potentially damage the whole, e.g. if a department becomes highly efficient in preparing patients for surgery, but the operation is not synchronized with these preparations. Hence, the efficiency gained in the first step would not carry through the entire process and could, in a worst-case scenario, lead to queues of “prepped” patients who might need to be prepped again when it is time for surgery.

Incentive structure

Since a key aspect of lean production is to encourage all employees to work toward the same goals, it is important to clarify the goals and reward appropriate behavior. Hence, it is essential that both the financial system and the monitoring system reward appropriate behavior. The things that are measured and monitored become the things that people care about. There are several examples of how rewarding inappropriate behavior leads to problems with resources in the next budget. Improvements in efficiency and quality must be recognized and rewarded through additional resources, greater influence, or other incentives.

Values

Lean production is not a collection of tools that can be applied individually – it is a comprehensive means by which to view the organization. To function, it must permeate all aspects, which makes it an issue about culture and values as well as an issue about work methods and flow. To achieve customer awareness,

the focus must shift from one's particular tasks to what is needed in the next step to achieve the optimum final outcome.

For middle management

Leadership

Leadership is key to the success of lean production. Leaders must create a culture having values such as openness, mutual trust, teamwork and customer focus, and must be accessible and visible to their staff. Trust is gained by participating in day-to-day work and asking questions, listening, and mainly acting on that which one learns. An important principle in lean production and quality improvement is to emphasize individual responsibility for work, i.e. everyone should be engaged and be responsible for the results of their own work.

To enable people to work with continuous quality improvement and clear customer focus, the responsibility and authority must rest with those who perform the task. Special demands are placed on leading an organization that functions in this way. An important principle is that the responsibility and authority must rest with those who do the work. This means that employees themselves make decisions to the greatest extent possible. If the tasks are well defined and customer needs are clear, the employees themselves should be able to determine how to deal with outliers and problems. Another important principle is that several employees should be able to perform each task; thereby limiting vulnerability if someone becomes ill, terminates, or has too heavy a workload in some part of the process.

Change and improvement

Continuous quality improvement is one of the cornerstones of lean production. Continuous improvement requires employees to reflect regularly on how work is performed and to be willing to try new, well-supported and well-conceived work methods. For successful improvement, changes must be implemented in a methodic and organized manner. Solid evidence should be developed to support every important decision at every level in the organization, for both short- and long-term decisions. All employees participate in refining their working methods over time. Everyone works in a process, and processes often include activities that do not create value and should therefore be eliminated.

Measurement and feedback

Measurement and feedback are necessary to improve quality. A fundamental principle for measuring productivity and quality is that we need to measure every process locally. Measurements should be used as a basis for improvements where they take place. All measurements should be fed back to those who performed the task. The goal is to be as quick as possible, preferably immediate. If the outcomes are not acceptable, immediate action should be taken.

For employees

Clear and common goals

A prerequisite for good performance at work is that everyone should be familiar with the criteria that define good work. In health services, it can be difficult to determine what to prioritize and where to draw the boundaries. Both productivity and quality are important, and employees must know what constitutes good work and what they should avoid. The boundaries

should not be set individually, but guidelines that are as clear as possible should be established to make it easier to do good work. Part of this involves giving everyone feedback on their work so they are aware of their progress in relation to the goals.

Standardized work methods

A task should always be performed uniformly in an optimal way to achieve the same outcome, regardless of who performs it. In that way, employees can avoid continually ‘rediscovering the wheel’. Standardization of work methods creates a certain predictability in the system, and energy can be directed toward improving the standardized methods. This enables employees to avoid unnecessary actions and to work with tools and devices that are as simple and efficient as possible. The goal is to work at a practical level of formalization, with simple and useable instructions, and avoid complicated and overworked structures and systems.

Continuous improvement in routine activities

One of the most important features of lean production is to involve all employees in continually improving work methods and eliminating unnecessary actions. Hence, all employees continually work to improve the way they perform their routine tasks by: constant questioning and proposing changes.

Customer focus

The goal is not; “I will perform my work so I will be satisfied”, but rather “I will perform my work so the next step in the process will be satisfied”. Everyone should focus on delivering the right things at the right time to their internal and external customers alike. Customers are the recipients of what I have produced.

Does it apply to health services?

Examples are emerging to show how ideas from operations management have been successfully applied to health services. Lean production is based on several simple, fundamental principles that can be applied anywhere. Avoiding unnecessary activities, constantly striving to improve, and involving as many people as possible in this quest are principles that are difficult to reject. Likewise, even in healthcare it is natural to find both good and poor ways to perform each individual task, and it is better if everyone uses the best way.

Lean production, as we have defined it above, is quite general. As early as 1994 we conducted a study on how to apply lean production in health services.¹ Not every change initiative in health services falls under the heading of lean production, but that is not what is important. What is important is that the principles inspired from industrial activities are beginning to be applied in health services. In one sense, it could be called “structured common sense”. Hence, it would be strange to think that the basic ideas would not function, in principle, in any organization. This is not to say, however, that healthcare and industry are identical.

Obviously health services are special. They deal with life and death, the well-being of people, and producing things as efficiently as possible is not always seen as the main goal, but rather the well-being of each patient. That is not to say that health services cannot learn from other sectors how to manage an organization efficiently. Some aspects of healthcare involve performing the same procedures on many patients in a manner that is quite similar to mass production. Special demands

¹ Karlsson, C., Rognes, J. and Nordgren, H. (1995) *En Modell för Lean Production I Sjukvården* [A Model for Lean Production in Health Care. In Swedish], Institute for Management of Innovation and Technology, Working Paper, p. 74.

for healthcare quality, patient consideration, and other aspects must be addressed, but other services also need to meet specific quality requirements and customer demands. Quality plays a central role in lean production, not least because it affects efficiency. Doing the right things from the outset can save considerable resources. Many industries also face substantially fewer quality problems than those faced by health services.

One of the major differences between the lean approach and a more traditional approach to activities, such as those that characterize health services, is a strong focus on throughput (patients in health services) rather than on resource utilization. This is central because of a fundamental conflict between the two. Particularly in a care context it is not possible to achieve both high resource utilization and rapid throughput. Success in this respect would mean working harder to reduce all forms of undesirable variations, e.g. those that might arise from deficient planning, poor routines, and poorly maintained equipment. It is here, in particular, that the principles of lean production apply.

It is important to note that healthcare encompasses variations that we cannot do anything about. We cannot always know exactly which diseases will affect what people, or when they will be affected. In other words there are different aspects in healthcare where concepts such as lean production may, or may not, be appropriate. For instance, the concept is very applicable in elective care environments that typically have relatively high volumes of patients. There one finds strong similarities to organizations where lean works well. The modifications that might be needed are minor. In care environments with inherently wide variations, particularly in emergency services, major modifications are necessary. However, this does not imply that knowledge from operations management is not

applicable. Our analyses of emergency services show a potential for improvement.

Why is it difficult for lean production to take root?

Clearly, introducing lean production offers the potential for improvement. We have observed several successful examples of introducing industrial thinking in health services by using elements of lean production, but it does not spread on its own and often meets resistance. Why is it apparently so difficult to change ways of working and thinking in healthcare production?

One reason why efficiency in health services has not progressed as far compared to other sectors is that in many cases the incentives to improve are lacking. A budgetary system where efficiency leads to a reduction in funding for the upcoming year means that system lacks the driving forces for improvement. Furthermore, budget overruns do not necessarily lead to any severe consequences, and in some cases can even lead to being rewarded with a higher budget the following year. Another example would be the purchase of a given volume of treatments within a fixed framework. If a department becomes more efficient and achieves higher productivity from the same resources it could lead to treating the given volume of patients by the end of November (one month before the contract expires). Should the department continue to admit patients without reimbursement, or should staff be laid off or reassigned to other duties for the remainder of the year? Another problem is that efficiency in producing health services is not adequately recognized as part of a physician's qualifications or career development. In many instances, proficient

specialists are more highly rewarded than doctors managing efficient and productive treatment of many patients.

Another reason why it is difficult for new forms of management to take root in health services is that a high proportion of middle managers in health services have no education in organization and leadership. Physicians, the professional group with the greatest influence on healthcare, generally lack the formal education and knowledge on how to efficiently lead and improve an organization. Hence, the understanding for new working methods and new ways of thinking about processes, efficiency, and customer focus does not easily take root among healthcare leaders. They find the terminology and ways of reasoning unfamiliar. Cultural differences between physicians, raised in the tradition of the natural sciences, on the one hand, and economic- and production-focused managers with a social science background, on the other, can lead to antagonism, misunderstanding, and conflict. Those who are knowledgeable about management and organizational issues know little about the treatment of patients, or the matters of life and death in daily work. Processes are their expertise, while this is an area where highly specialized physicians, whom not always appreciate advice from non-physicians, may not be equally competent.

The medical profession plays an extremely strong role in today's health services. In some areas, greater efficiency could lead to having less autonomy over one's own work and the need to adopt routines and structures that have been developed by others. This is not always perceived as positive, and arguments such as "not part of my medical responsibility" or "every patient is unique" are used to defend the right to work as one has always worked. Attempts to standardize work methods emanating from within the profession itself are difficult enough. The thought of a non-physician telling physicians how to perform their duties is particularly foreign – even when

it does not deal directly with the medical aspects, but with organizing the flow and collaboration between units.

Another obstacle facing change in healthcare is that efficiency is often associated with profit, and profit has a somewhat negative connotation to some groups in healthcare. “We should not profit from sick people” cites one politician, but that attitude characterizes part of the debate. Profit does not necessarily mean that resources will be taken from health services, or from those needing services, but is primarily a measure of organizational efficiency. Efficient health services that are “profitable” generate a surplus of resources that can be reinvested. An argument against efficient, specialized units, particularly under private management, is that they engage in “cherry picking” and take only the most attractive cases. It is not necessarily an argument against specialized services, but rather an indication that the reimbursement system does not work well. The current DRG system makes it difficult to manage reimbursement fairly, which is essential for economic incentives to serve as management tools.

Healthcare is a complex enterprise in terms of content, management systems, and clients. Although all of the elements of lean production will not apply everywhere, we need to adapt the approaches and methods to the different ways of working in healthcare. An acute care hospital does not function in the same way as a department of surgery, just as an automobile factory does not function in the same way as a call center. On the other hand, leaders in call centers, the banking sector, and heavy industry have successfully applied the basic principles from lean production, and there is much to suggest that the same is possible in health services.

From the examples of new ways of working with lean production in healthcare we have observed a clear trend indicating that small islands become established and use new work methods, often with positive results. However, the methods do

not appear to spread easily, either within the organization or among hospitals. Many initiatives to improve work methods are under way at the departmental level, where local processes are reviewed and rendered more efficient. The local approaches use tools and methods from lean production, but the culture and philosophy do not permeate the entire organization. It is shown to be more difficult to implement process thinking throughout an entire continuum of care. Much of the success behind implementing lean production is based on changing the attitudes of everyone, toward a clearer customer focus and through continuous quality improvement. It is not relevant to do this locally in an organization; to fully succeed it must permeate the way of thinking throughout the entire organization. Changing the way of thinking in an organization, management system, and profession is a formable challenge, but those who succeed potentially gain a major advantage.

What should the debate focus on?

From our operations management perspective, where we focus on how to organize different activities to better meet the demands placed on them, we can see distortions in the debate about healthcare. Much of the debate deals with solving problems in healthcare by allocating more resources. In contrast, we believe that it should focus more on utilizing healthcare resources in a better way. By learning from other organizations, primarily from industrial organizations that have been forced to improve for a longer time, health services can improve without adding resources. Quality can be enhanced, but mainly access to health services can be improved, which is of major importance.

The idea that health services can learn from other (industrial) organizations often faces counter arguments. A common argument is “It’s about people, not cars”. This, of course, is true, but it does not mean there are no lessons to learn. In fact, patients occasionally fare more poorly in healthcare processes than cars do in a modern automobile factory. Another argument is that the use of industrial principles would mean that the staff would need to work harder. Not true – it’s about working smarter, not harder.

Instead, the debate should address what could be done to make it easier to implement necessary changes in health services. How can health services apply lessons and working methods from other sectors, e.g. industry and the private service sector? Improvement cannot come without change, but it appears to be a major, inherent sluggishness in health services. How can we avoid this sluggishness while concurrently avoiding the risk of damaging the parts of healthcare that perform with excellence?

Industrial principles such as lean production can serve as a starting point for improving health services, given the modifications that are necessary to adapt these principles to the different activities in healthcare and social services. Organizational logistics are not the same in a community health center, an emergency department, a regional hospital, or a university teaching hospital. Hence, it is about a change in a dual sense. Unfamiliar ideas and ways of thinking need to be adapted to the special conditions of healthcare, but healthcare also needs to adapt. The debate should focus on how health service organizations and working methods can be changed to function more efficiently, and what is needed to implement such change.

“Despite the attention that IT issues receive in healthcare, risk assessments, project evaluations, and even media coverage deal largely with outward symptoms but very little with deeper causes of problems. We believe this will continue until the parties involved first acquire a deeper understanding of the transformation process that turns IT resources into organizational performance and patient benefits, and then allow this understanding to influence attitudes and approaches to IT-related organizational improvement.”



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IT in healthcare: eternal promise and everyday curse

Swedish healthcare organizations invest billions of kronor (SEK) in information technology (IT) every year. The hopes and expectations placed on this technology are high: IT is seen as a shortcut to efficiency in times of distress, a tool for increasing productivity without layoffs, a means to increased patient influence, a fundamental prerequisite for shaping tomorrow's healthcare organizations, and a key factor for increased quality of care. Consequently, the use of IT continues to expand in healthcare: IT is now deeply integrated into core healthcare processes, and medical equipment is often extensively integrated with information systems that support operational and administrative processes.

Parallel to these developments, problems with IT can be seen everywhere: medical record systems reduce the time physicians spend with patients; separate and uncoordinated projects in various regions in Sweden implement the same type of systems purchased from the same handful of vendors; enormous IT projects break their budgets and draw scarce resources away from operational activities; and some IT investments simply come to nothing. The worst cases include problematic IT investments that survive in a zombie-like state where money continues to flow while the prospects for realizing organizational improvements and higher quality of care become increasingly unlikely.

While IT offers an eternal promise, all too often what it delivers at an everyday level is a curse – or at least a recurring disappointment and a major annoyance. We believe that crucial aspects of this problem lie in the perception of, and approaches to, IT investments and IT project implementations. Furthermore, we believe that the discourse on IT in healthcare should focus relatively less on technology choices and functionality, and more on developing skills, finding effective approaches to organizational change, improving interaction and collaboration among professions, and establishing practices for long-term process improvement.

Changes are needed in knowledge, understanding, attitudes, and approaches to IT investments in order to harness more of the potential that IT-related organizational improvement actually offers the healthcare sector. These include:

Deeper understanding of how IT contributes to process innovation, organizational performance, and patient benefits: Both strategic decision making on IT and day-to-day management of IT implementation efforts require a thorough understanding of how IT resources are transformed into organizational benefits. A rich understanding of this process has to include that all benefits from IT are achieved *indirectly* – through process improvements and other organizational change efforts.

Greater attention to the work processes and challenges of IT implementation efforts: Since IT only creates value indirectly, decision-makers need to understand and appraise the challenges involved in concrete implementation. Simply deciding on a cost estimate or project plan is inadequate to ensure that IT investments lead to value creation.

Better ability to appraise and take into account the change capabilities of a specific organization: Some health service organizations have very limited experience of and little expertise in organizational improvement. Such organizations must learn to crawl

before they can walk, and while some IT investments might look good on paper, they will be of little use unless the organization possesses the capabilities required for change, including personnel who are willing and able to pursue a change effort.

A greater ability to bridge and to combine the areas of expertise that are involved in IT-related improvement efforts: The healthcare context engages at least three types of professionals, each with distinct perspectives: medical professional, IT professionals, and management professionals. None of these groups have sole ownership of change management or of organizational improvement work, and all of them need to collaborate in order to bridge and combine their particular areas of expertise and their different perspectives.

Greater capability for organizational change and process development within healthcare organizations: Risks associated with implementation decrease substantially if regular healthcare personnel possess a basic understanding of project work, process design, and organizational change. Extensive reliance on external expertise (i.e. consultants) increases the risk that a project will not be successfully implemented or that a new system will be incompatible with present and future work processes. Therefore, it is preferable to carry out several smaller, unit-level projects to enable learning and reduce implementation risks rather than gamble on a few large IT projects.

Based on our research on healthcare organizations and organizations in many other sectors, we provide an overview of these issues in this chapter. By doing so, we hope to help improve the way that elected officials, public administrators, managers, healthcare staff and other stakeholders approach IT-related organizational improvement.

How does information technology contribute to value creation?

It took several decades of IT use in corporations and other organizations before statistical information could establish the positive effects of IT on organizational productivity. Now we can conclude that, on average, IT investments clearly have a positive economic return – which explains why nearly half of all capital investments in organizations involve IT. But in this case, the notion of “average” is about as helpful as judging a person “on average comfortably warm” when she has one hand in a freezer and the other in an oven. In other words, the data shows that economic returns from IT investments vary dramatically, from strongly positive to strongly negative. (Returns covary with productivity and the perceived quality of products and services). What are the reasons for these differences? Simply stated value from IT investments depends upon two key capabilities: *an organization’s ability to combine investments in IT with improvement of its operational processes, and its ability to select and implement IT projects that are consistent with the organization’s strategic aims* (or overall trajectory of development).

Although this might appear to be self-evident, we repeatedly observe that people fail to work with IT projects in the ways required. One fundamental problem is an inadequate understanding of how IT contributes to value creation, or put differently, wishful thinking that IT projects per se create value. The problem is that IT is not like a toaster. Plug a new toaster to an electrical outlet and it works. It does not require any modifications or add-ons, its use requires in principle little or no new learning, and certainly its owner does not need to rethink the entire breakfast-eating process to benefit from it. Traditionally, some investments in medical equipment have functioned like investments in a new toaster, particularly when replacing an existing unit with newer model or when the new unit

replaced a particular combination of existing units. One such example would be a new dialysis machine that reduces the treatment time per patient, but does not require a change in work processes.

Obviously most IT investments in healthcare today do not involve “toasters”, but information systems that are integrated into work processes in complex and multifaceted ways, often crossing unit and organizational boundaries. Increasingly these systems are integrated with medical equipment, e.g. systems for digital radiography (RIS/PACS systems). For these investments to yield positive outcomes such as increased productivity, greater job satisfaction, or improved patient benefits, the people who influence IT investments must have a deep understanding of the transformation process that converts IT resources into organizational benefits and improved business performance. We often speak of implementing or deploying IT, but the process actually deals more with mutual adaptation and continuous improvement of work routines, business processes, organizational control, and information systems.

Consider, for instance, the introduction of digital radiology, which in many cases has not produced the intended and expected results, especially in terms of cost savings. Often the primary explanation for this failure is that organizations have switched from analogue to digital technology, but have not changed their work processes. In these cases, the new technology has been configured to fit with existing analogue processes, and as a consequence existing routines have been reinforced, while the opportunity brought by the technology shift to rethink work processes has been temporarily or permanently lost. In cases where we observe substantial effects from digitizing radiology services, we often find that the project incorporated changes in work processes, changes in the skills and composition of staff, changes in control systems, changes in organizational goals and performance standards, and a

gradual increase in the ability to work with continuous process improvement. *A central conclusion is that the value of an IT project is determined largely through how the hands-in implementation work is conducted, and by the ongoing efforts to improve operational processes once the system is in place.*

The importance of IT implementation activities

Even though implementation to a large extent determines the value of an IT investment, it is often treated as rather unproblematic in decisions on IT projects. In fact, investment processes and implementation processes are often decoupled. Consequently, the work activities that create value from the investment are commonly underestimated during the investment stage, which has several important consequences.

The first consequence is that the challenge and complexity of implementation is underestimated. This leads of course to insufficient resources being allocated to implementation, including financial resources, personnel, and expertise. Furthermore, the costs for hardware, software, and system adaptation often end up consuming such a large portion of an investment budget that managers routinely elect to skimp on education and staff participation. This increases the risk for problems in the implementation process and lowers the likelihood of achieving the intended outcomes. It follows then that established – and often inappropriate – operational routines remain in place because staffs at local units have neither an incentive nor a platform from which to question them and drive local efforts to improve them. In other words, there is insufficient pressure to change.

Another consequence is that the implementation of IT projects is often added to other reform initiatives emanating from the societal level as well as from county government and

organizational levels, without consideration of the cumulative burden these initiatives place on staff. This contributes to the widespread “change fatigue” often observed in the healthcare sector. Staff members are hard-pressed by cutbacks in resources, by demands to engage in productivity initiatives, and by the emotional baggage of earlier, unsuccessful projects. This can rapidly become a vicious cycle of failed change efforts. To reduce the risk of such problems and to better enable operational improvement activities, staff training and personnel changes, much greater attention is required towards assessment and appreciation of any given organization’s readiness for and ability to conduct change efforts.

How much change can an organization embrace?

Beyond the fact that change fatigue per se can present an obstacle to successful implementation of IT projects, many healthcare organizations lack the expertise necessary to carry out IT-related operational improvement. Historically, healthcare organizations have been stable, budget-driven, and relatively free from pressure to change. The changes that have occurred have often been within the medical profession’s domain, typically in the form of new treatment methods. During the past 15 to 20 years, this has changed as the sector experienced a powerful increase in the number of both general reforms and local initiatives, combined with increasing pressure to change. Generally, however, this has not led to an increased capability among healthcare providers to work with organizational and operational change.

Perhaps existing attitudes have been too deeply ingrained and too difficult to change. Perhaps there has been too little common cause and common views among the various stake-

holders for changes to be wholeheartedly embraced and take root. Perhaps the changes occurred so quickly and so often that learning became overly difficult. Or perhaps quite simply organizations gradually get good at improving by persistently and somewhat systematically working to improve. What happens when an organization works with continuous improvement – if it has drawn successfully on its experience to adapt behaviors – is that over time it builds up its capability to improve, its developmental aptitude.

Several related improvement capabilities are essential in working with IT-related organizational improvement:

Project management and project work: Although good project managers are essential, and often in short supply, this capability relates to an entire organization's capacity for implementing projects. This means that experience of working within a project structure needs to be sufficiently widespread in the organization so as to establish a solid foundation for working with tasks such as process design and requirements for new information systems. Clinical organizations generally focus on individual patients and on solving acute problems to assure that the work continues uninterrupted and that patient safety is never jeopardized. By comparison, working with development projects is a very different type of situation.

Process improvement: Work with process improvement requires being able to think in process flows and command methods and tools for process design. This work approach is often at odds with the well-defined roles and expert-specific tasks that traditionally characterize health services. The case-based method of medical practice, where every patient represents a "case", often leads to a very deep understanding of small parts of particular process, but it does not lead to knowledge about – or interest in – an overall process and how one's own contribution to a process affects, and is affected by, other parts of it.

Process work requires healthcare staff to adopt a different perspective on the organization and a new way of describing what the organization does.

Redesign of organizational structure and control mechanisms: Adoption of new technology and process improvements often need to interact with changes in “vertical” organizational control (top to bottom) and changes in organizational structure and staffing. This capability is not about drawing new boxes on an organizational chart – often that is all too simple, happens too quickly, and has little effect. Instead, it concerns the ability to make the necessary changes in reporting relationships, decision-making authority and accountability in ways that harmonize with other ongoing changes and support rather than undermine new work processes.

Integration of knowledge in medicine, IT, and management: The capability to mediate and combine knowledge and perspectives needed to utilize IT in a way that creates value is important. This is apparent, for instance, in the high demand for people with multiple areas of expertise, as well as in the difficulties often encountered when people in healthcare attempt to carry out cross-functional roles. For instance, are you a “real” nurse if you work full time with IT? One way to improve an organization’s capability for integrating knowledge is to recruit more people with dual qualifications; another is to shape work processes and norms that enable greater interaction and knowledge sharing across areas of expertise.

Capacity for empathy: Viewing IT as a “toaster”, i.e. a new piece of equipment, or a “prescribed treatment” for an organization – in short, applying a wholly rationalist perspective to IT implementation – of course carries consequences. A common one is that key actors neither see nor make visible the profound challenges and efforts that the implementation of an IT project entails for the staff. This is comparable to a lack of empathy for

those who are affected by – and who are mainly responsible for achieving value from – an IT project. Given the nature and aim of healthcare services this is paradoxical, but unfortunately not unusual.

Change management: Drawing upon a common distinction between management and leadership, one could say that project management requires administrative skills (the planning, implementing, and monitoring of non-recurring tasks), while change management requires leadership (generating commitment to change and enthusiasm to carry it out). In addition to requiring leadership skills, change management also requires the legitimacy and authority to engage others in change processes. While physicians usually have considerable legitimacy and authority, not only in medical matters but also in organizational decisions, the criteria and values that promote advancement in the medical profession are not primarily targeted at developing leadership skills. (Obviously this is quite reasonable – most patients would prefer their physicians to be evaluated and promoted for their medical skills, not for their charisma!) Consequently, it becomes important that people who are not members of the medical profession can be accepted and respected in management roles within healthcare organizations.

The central feature of these improvement (or dynamic) capabilities is that they evolve gradually, and therefore the level of ambition in IT projects and other change processes needs to be suitably adapted to what a specific organization can handle. One might question our insistence upon crawling until one can walk and point to the availability of external expertise. Granted that external consultants can contribute substantially to change projects, they cannot however replace the participation of regular staff in organizational development. This is because people within the organization must be able to formu-

late sufficiently clear demands on the functionality of new systems and because the regular staff must be the engine that drives continuous improvement. This is why management teams at different organizational levels must take stock and decide how many development projects to sustain simultaneously. This decision should include an assessment of the organization's capability to effectuate change, without the wishful thinking or blind faith that "it will work out somehow". Too many simultaneous projects exhaust key staff members, increase the risks associated with implementation and increase the risk for change fatigue. Therefore an appraisal of the capability for improvement of particular operative units should influence investment decisions, not just the planning of implementation. Disconnect or decoupling between IT investments and their implementation is detrimental to getting value out of IT. Since partially completed IT projects have essentially no scrap or sales value, even the term "investment" is perhaps somewhat misleading: Once money goes into an IT project, there is in principle nothing to sell; the organization has little of value before functioning systems and more effective processes are in use.

For an organization to increase its capability to drive operational improvements, the staff must also be willing to adopt new approaches to working and thinking. This is made more difficult by the involvement of (at least) three professions, which can claim expertise in different areas of relevance. The increased difficulty arises in part because members of these professional groups do not always understand and respect the perspectives of the others. *Individuals from different professions must learn to collaborate, which of course is facilitated by mutual respect and overlapping competencies across areas of expertise.*

Overlapping competencies across areas of expertise

One classical profession and two new ones are involved in IT projects in healthcare: the medical profession, the IT profession, and the management profession. (This is somewhat of an oversimplification since one should probably distinguish the medical profession and the nursing profession.) As professions, IT and management have emerged more recently and are less clearly institutionalized than medicine, and therefore less clearly demarcated. Nevertheless, they demonstrate the obvious characteristics of a profession: values, norms, procedures and behavior are similar among IT professionals across organizational and national boundaries. The same generally applies to managers. Even though no formal licensing is required to work as a system developer or controller, there are many other mechanisms (e.g. education and socialization in the profession) that regulate the practices, knowledge and occupational perceptions of members in the profession; these remain relatively constant across individuals and therefore have some degree of predictability – fortunately.

Each of the three professional groups brings to bear skills, values, and norms that are related to dealing with change. But none of these professions “owns” the concept or activity of organizational change and improvement, and no profession alone has sufficient expertise in this area. Healthcare staff, IT professionals, and business specialists must be able to create value together, which is easier said than done since they not only play different roles, but also have different starting points, perspectives and norms. IT professionals, for instance, are generally trained to think in terms of whole systems and process flows – work processes and information processes; but their largely engineering-based perspective at times leads to overconfidence in “systems solving problems”, and a blindness to

both the individual's importance and the learning processes that change system use over time.

Similarly, managers' training usually prepares them to think in terms of resources and outcomes and to adapt organizations to changes in internal or external conditions. On the other hand, from their economic perspective managers can at times find it difficult to acknowledge and accommodate for benefits that are not expressed in economic terms, and their view of change can overemphasize decision-making – to the extent where a change process is viewed as a mere consequence of economic decisions, not something that is crucial for creating value.

Medical personnel at every level obviously possess the key competencies of the domain, the skills to provide health services. However, there is also a risk that their special position is used to block change efforts. Medical skills do not necessarily offer the optimum qualifications to work with improving operational processes, and the natural science perspective can lead to a rationalist view of change that underemphasizes the importance of local learning and local adaptation. This multi-professional environment makes IT-related improvement efforts in healthcare particularly complex. The good news though is that all these groups have competencies that enable them to contribute substantially to IT-related organizational improvement efforts.

Another problem that emerges in complex situations that entail difficult priorities is an inclination for individuals to try to delimit their responsibility. For example, IT consultants and systems analysts can choose to see their responsibility as delivering what has been ordered, rather than ensuring that the use of technology leads to organizational and patient benefits. Managers can choose to view their involvement in IT projects as centered around requesting and evaluating investment proposals and making economic decisions. Healthcare profession-

als can choose to conceive of their responsibilities solely as ensuring patient safety and safeguarding the working conditions of the current staff. These delimitations are all unfortunate since these groups need to create value together rather than demarcate their respective areas of responsibility. Even though the actors have different roles and responsibilities, it is more important to find ways to bridge these domains of responsibility and expertise than to delimit them.

Enabling this to happen requires the right conditions and work procedures, people with the necessary competencies, and roles within which these people can operate. Important prerequisites include training in project work, process improvement, and integration of information systems into organizational processes; new attitudes toward cooperation; and processes of mutual learning. Bridging the gaps between the areas of expertise also requires change processes that create arenas where different groups can meet, which facilitates the dialogue that builds respect and trust.

Equally necessary are individuals who are willing and able to play integrative roles – and these individuals need to be accepted and be given opportunities to operate. Change agents and change leaders are needed to function as translators and integrators, work which includes managing processes that combine areas of expertise, understanding each profession's sacred cows and *bête noires*, communicating adequately with each profession on its own terms, and facilitating dialogues that foster mutual learning across professional boundaries. The individuals who do this, and their backgrounds, should be of lesser importance, although a medical background does facilitate the acceptance and legitimacy necessary to play this role. There are many cases of change leaders or managers with no medical expertise being appointed, and the differences in language and perspective proved to be so great that collaboration failed and resistance to change intensified.

Obviously in an environment with so many strong professions it is not easy to hold positions that are not based on expertise and are instead open and integrative. The skills needed to manage change are also to be found with project managers, business developers and general managers. Finally, the conditions for creating mutual respect and dialogue are clearly dependent upon the above-mentioned capacity for empathy – or lack thereof – of organizations and their leaders.

In addition to finding ways to educate and develop people working in healthcare organizations to play integrative roles, we also need to explore opportunities to create more of these roles and related positions within organizations, and accord higher status to generalist roles and educational programs that encompass more than a single area of expertise and one professional perspective. Experts in medical informatics, health economists with managerial focus, and managers with high level of competence in IT and business development are examples of “integration and change experts”. It is essential though, that education and training programs with these profiles adequately emphasize the skills necessary to manage change. After all, these initiatives should aim specifically to produce more individuals with the abilities to conduct change efforts and link different areas of expertise, while also ensuring that these people and positions receive the necessary recognition and respect from the professionals involved.

Ways forward

This chapter has focused on how IT can contribute to creating value and the conditions necessary to take advantage of the potential of using IT to improve healthcare organizations. One of our main points is that decision-makers – from politicians and administrators to hospital managers and department

heads – need to increase their attention to and understanding of IT implementation activities and work with continuous process improvement and other types of organizational development, since these areas determine the return on IT investments.

We have also emphasized that organizational improvement is necessary if IT projects are to create value, that change management is a specific and crucial competence that needs to be upgraded in the healthcare sector, that the improvement capabilities of organizations need to be treated more prominently, that bridging the gaps between areas of expertise and professional groups is important for development, and finally that the development of expertise surrounding all these issues needs to encompass both central decision-making bodies and operational units.

An important condition for getting value out of IT that we touched on briefly at the beginning of this chapter is that IT investments should fit with an organization's overarching direction and strategic aims. Insufficient coordination of IT investments with central purchasing and development activities and with strategic aims leads to, for example, that even successful and noteworthy cases of innovative IT use, such as in teleradiology or remote surgery, surprisingly often remain isolated and local phenomena. Initiatives to coordinate investments, for example joint purchasing of systems for several organizations or counties, are important. However, it is also important to continue developing ways to more systematically share knowledge about successful projects and promote learning across organizational boundaries.

In line with the arguments presented in this chapter, we need to examine the language surrounding these kinds of projects and be more consistent in talking about “IT-related organizational improvement” (yes it's a mouthful!) rather than “IT investments” or “IT projects”. “Organizational

improvement” because it is here that value is created, or not. “IT-related” because the technology strongly influences the types of expertise that need to interact and because the features of technology per se play an essential role in how decisions and change efforts play out. But new words alone are inadequate; new ways of doing things are vital.

Healthcare providers can, and should, develop both a more consistent attitude toward IT-related organizational improvement and a common base from which multiple stakeholders can drive this development. Healthcare providers also need to improve their improvement capabilities, which involves: a) a general improvement in the expertise of healthcare personnel to conduct change efforts and improve operational process with the help of IT; b) a broadening of the definitions of what constitutes the core competencies of the professions involved. Members of the medical profession(s) need to define project work, project management and continuous improvement of operational processes as an integral part of their professional practice. Members of the IT profession need to develop their supportive, consultative skills to complement their expertise in systems design and project implementation. Likewise, people in management teams and other roles rooted in business and management need to develop the skills needed to take responsibility for IT-related change efforts and to actively lead change.

It is also essential to find and develop change agents and change leaders, create reasonable conditions for them, and facilitate both their work and their acceptance by colleagues from all professions. IT-related organizational improvement can benefit greatly from “translators” who create trust and achieve legitimacy in different camps, who have communication skills, who can unite different sets of experts, and who have or can achieve sufficient support to implement change. Educators, human resource specialists, and healthcare manag-

ers all have an important responsibility to assure that qualified candidates are available to play these difficult roles – and that they receive adequate support.

The full potential of using information technology to improve healthcare services remains a long way from realization. Despite the attention that IT issues receive in healthcare, risk assessments, project evaluations, and even media coverage deal largely with outward symptoms but very little with deeper causes of problems. We believe this will continue until the parties involved first acquire a deeper understanding of the transformation process that turns IT resources into organizational performance and patient benefits, and then allow this understanding to influence attitudes and approaches to IT-related organizational improvement.

Background and further reading

The discussion on IT and creating value presented in this chapter is based in part on: Lundeberg M., Mårtensson P., and Mähring M. “Transforming IT resources into business performance”, in: *IT & Business Performance – A Dynamic Relationship* (Lundeberg M., Mårtensson P., and Mähring M. (eds), Studentlitteratur, Lund 2006. This book also presents an overview of research in the area.

For further information on the above discussion regarding implementation of IT projects, see: Mähring M. and Källberg N., “Construction of Technological Determinism as a Strategy for Coercive Organizational Change: Implementation of Digital Radiology in a For-Profit Healthcare Organization”, The 22nd EGOS Colloquium, Bergen, July 5–8, 2006. See also Källberg N. and Mähring M. “Pushing Organizational Change with Technology: Re-balancing in a Radiology Unit” in: *IT & Business Performance – A Dynamic Relationship*; Lundeberg M.,

Mårtensson P., and Mähring M. (eds). Studentlitteratur, Lund 2006.

A well written, thought-provoking article on the use and benefits of IT is: Markus M.L. and Keil M. "If We Build It, They Will Come: Designing Information Systems That Users Want to Use". *Sloan Management Review*, vol. 35, no. 4, 1994, pp. 11–25.

For more about change and change fatigue in Swedish healthcare see, e.g.: Axelsson R. "The Organizational Pendulum – Health Care Management in Sweden 1865–1998," *Scandinavian Journal of Public Health*, vol. 28, no. 1, 2000, pp. 47–53.

“ We often forget to ask the most important questions related to change processes, in this case: What is a hospital and why does it look like it does? Must a hospital look like it does? And what is actually an information system and how can it be used? Instead of turning different phenomena inside out and asking questions, we continue to think and act as we always have – even when our intent is to change and improve. ”



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Hospitals or healthcare – designs in concrete and infrastructure

In the 1700s, Sweden began to build hospitals in most of its major cities, e.g. Serafimer Hospital in Stockholm in 1752. Some years later, the first medical records appeared on paper, an anesthesia record. Several other important hospitals were built during the 1800s as healthcare expanded. Since that time, hospitals have more or less looked much the same. According to the influential French sociologist, Michel Foucault, the department was a phenomenon that would quickly increase and institutionalize the distance between “the patient’s complaint and the physician’s eyes”. Today, some critics believe that we organize and deliver health services based on the departments available, not based on the diseases that the patients present. Today, someone with an ear inflammation visits the ear, nose, and throat department, and someone with inflammation in the heart region visits the coronary care department. Perhaps all patients with inflammatory disorders should receive treatment and care at one and the same place. But it is difficult to think in new ways. It raises debate. It costs energy. Nevertheless, there is often a need to redefine the models that many different organizations and working tools are based upon, not just within healthcare.

Does building design play a role for the services provided within?

Yes, of course it does. If hospitals looked different, then health services would be provided in another way and information systems would look different and be used in other ways. Hospital design affects care delivery. In turn, care delivery affects facility design. This, in turn, affects the information system; how it develops and how and what it is used for. In this chapter, I address architecture, design, and color theory as important elements in attempting to reform healthcare and its processes.

Research from the Center for Health Design in San Francisco shows that design affects both environment and ergonomics. Architecture and design contribute toward greater satisfaction, functionality, and efficiency in work places. Increasing natural light and reducing sound, for instance, reduces stress levels in an organizational unit. Standardizing operating rooms reduces the risk of performing surgery on the wrong site, wrong side, or even the wrong patient – which unfortunately is not an unusually rare event today. Design can eliminate safety risks, and can even save lives. We also know that beautiful and pleasing hospital environments can favorably affect the healing process.

Already in 1860 in her book “Notes on Nursing”, Florence Nightingale wrote about the importance of furniture and bedding and the role played by the appearance of the room where health services are delivered:

“...the unqualified result of all my experience with the sick, that second only to their need of fresh air is their need of light; that, after a close room, what hurts them most is a dark room. And that it is not only light but direct sun-light they want. ...People think the effect is upon the spirits only. This is by no means the case. The sun is not only a painter but a sculptor. You admit that he does the photograph. ... [light has] real and

tangible effects upon the human body. ...The cheerfulness of a room, the usefulness of light in treating disease is all-important.”

“A common low, well-padded armchair with pillows and a footrest is the best, not too high, and not too deep, but with support for the legs and feet so that the knees are elevated, which is a great relief for patients who can sit up. Giving patients support on as many points as possible is what we should strive for, and this is what hospital chairs do not offer, and once patients sit in them they cannot get up.”

Hence, early on, Florence Nightingale emphasized the importance of environment and interior design in curing sick people.

What then is a hospital?

One of the earliest definitions of hospital is that it is a building with a unit for surgery and with beds where patients remain overnight. It can also be described as a place that offers multiple services related to medical care. A hospital consists of departments, many of which are as large as medium-sized corporations with 200 to 400 employees. A hospital director manages the hospital, and department heads oversee the departments. It is not unusual for them to disagree about the direction that the organization should take.

The importance of a hospital was described in “The Community General Hospital”, a book published in 1962 by authors Basil S. Georgopoulos and Floyd C. Mann:

“Few other institutions have such a great importance for us all, or affect our lives as much as the hospital. Few other organizations have a clearer mission for their members and clients or play such a decisive role in the complex social situation in

which they serve. In our society, the hospital is one of the organizations whose purpose is familiar to everyone and whose function engages everyone. Like the family, school, and government, the hospital is an organization that affects us all, individually and collectively. Our personal physical and mental health, our society's well-being, and our economic resources are affected by how our hospitals work. The fact is that seldom are we as dramatically dependent on an organization's products or services as when it comes to the hospital".

Hospitals are associated with life, death, feelings, and drama. Perhaps that is why trying to change what hospitals look like is such a sensitive issue.

American researcher Henry Mintzberg includes hospitals in what he usually calls "*the professional bureaucracy*". The professional bureaucracy employs well-educated, trained, and culturally well-integrated specialists, professionals in their organization and gives them substantial autonomy and control over their work. This means that the professionals work relatively independently of supervisors and colleagues, but close to the clients that they serve. According to Mintzberg, a professional bureaucracy is also a place where: "the organization's technology, i.e., its knowledge-base is sophisticated while its technical system, or the collection of instruments it uses to apply this technology, is unsophisticated".

Authors Carr-Saunders and Wilson made a similar observation as early as 1933:

"Medical experts like to use the most recent and best technology when they use their skills and knowledge, but the rest of the tools they use can be old fashioned and the "best before" date has expired. A professional man or woman is generally a conservative individual who works for stability and resists change. The British Medical Association was accused of resisting change already hundreds of years ago".

Dual leadership is another characteristic of hospitals, i.e. they are led by both the administrative and the medical experts. These experts seldom agree on their view of the future. For instance, in one study, British researcher Paul Bate describes how “tribalism” among medical specialists can demoralize and destroy an entire hospital under weak leadership.

Medical networks

In the 1940s, American researcher Robert Merton showed that when a task is specialized people tend to focus more on their own part and become less interested in the overall context of the task. They become increasingly less concerned about how their contribution fits in with the contributions of others. A physician is a specialist and prioritizes what he or she does. And that is how it should be. But concurrently, a physician is also part of a network that preferably should function. The farther that specialization is driven in healthcare, the more urgent it becomes to debate the need for a holistic perspective on what health services provide. What should we do to benefit from all of the knowledge available? How can we reduce territorialism as a hindrance to development, and work together in the interest of the patient?

The opportunity for a professional to exercise power over a given area depends on the prestige accorded by a particular academic discipline. This prestige “*reflects the public’s mistaken belief that abstract professional knowledge is continuous with practical professional knowledge, and hence that prestigious abstract knowledge implies effective professional work*”. Abbott, who is a professional researcher, argues that abstract knowledge systems are the most important currency in the competition between different professions. When a professional works in this way, he or she puts in and takes out information from this knowledge system.

This is a process which, for all professionals, consists of diagnosis, interpretation, inference, and decisions for action. The first, most important, and perhaps most difficult task of a physician is to establish the diagnosis. Skillfully diagnosing patients is first achieved after lengthy and systematic training and many years of professional experience.

Medicine is currently described as a complex job where time is critical and which takes place in networks with many ramifications. To facilitate communication, collaboration, and coordination, the work is supported by tools such as clinical guidelines, patient records, lab results, and radiology images that many different actors use for many different purposes. Concurrently, medical practice is characterized by documentation of information, which poorly structures the use of time. The same data are documented time and again at many different locations, e.g. primary care, emergency departments, and clinical units.

Information systems in healthcare

An “information system” often refers to a system that contains elements for collecting, processing, storing, searching, distributing, presenting, and using information. An information system is part of the organization that it serves. An information system can also be viewed as an organized activity between people to communicate information about something to each other.

Most research on information systems has focused either on what the implementation process looks like, or the factors that contribute to success or failure. What kind of collaboration exists between the designer and the user, what political motives do various interested parties have in implementing an information system, and what risk factors must be considered

in implementing projects? A small number of factors have been found to an ongoing influence in implementing new information systems. These “critical success factors”, i.e. for whether or not a project succeeds, depend on the support of the senior leadership, the influence accorded to various interest groups, the design of the information system, and the motives and knowledge of the users.

Many IT projects have been initiated in healthcare in recent decades, and development and implementation of new IT products is taking place at many different locations. The hope is that these efforts will serve as change agents for different organizational processes and will promote further development.

Early in the 1960s, medical decision-making and all information processing related to it was recognized as the most important aspect of administration in a hospital. A document produced in May 1965 by Karolinska Hospital entitled, “Economizing in Hospitals Through Automated Data Processing (ADP)” presented a discussion similar to that of today. Society’s costs for healthcare have skyrocketed. Also, many providers have problems in recruiting staff. Hence, the Swedish Government decided to study the possibilities for economizing health services using ADP. The aim was to construct a new information system for Karolinska Hospital. The need to coordinate planning, patient care, control, and research have increased drastically. It is difficult to plan a patient’s pathway through the hospital. Just like today, the authors of the document in the 1960s believed that ADP could potentially reduce costs and increase efficiency. And just like today, they called for a problem-oriented patient record. So, why does it take such a long time to get anywhere?

Patient record or information system

Healthcare providers use patient records in conjunction with diagnosis and decision-making. The patient record is a tool that regulates the relationship between physicians and patients, but also among physicians, other colleagues, and the National Board of Health and Welfare. By law, the National Board places certain requirements on the contents of a patient record. But medical experts develop the patient record, and hence it varies depending on the specialist that produced it. The patient record is the place where critical data on medical care, patient history, lab results, radiology images, and other information is compiled. Physicians base their care decisions on this information. Tools such as patient records are also based on how caregivers work and the organization within which they work. In many situations, tools such as patient records serve as the glue that holds a particular type of social order in place.

Depending on the specialty involved, patient records look different and are used in different ways. But they comprise an important part of the information mass in a hospital; therefore it is important how computerization occurs. Attempts to computerize patient records have even been described by some as kind of modern “crusade” and major challenge for those active in the field of medical informatics. Practical skills such as writing patient records involve judgments, interpretations, and following rules. In turn, this involves certain rituals that create and shape a physician’s day. A special type of thinking, a style that has developed collectively in medicine, characterizes the information recorded in a patient record. And that does not change easily.

Many myths surround patient records; what they are, what they should look like, and how they can be improved. Improving and changing patient records appears to be an endless

project in healthcare. Many physicians and nurses also document increasingly more information to indicate what they do and to protect themselves against potential malpractice claims. Patient records are also used in quality improvement programs, which have been under way in healthcare since the 1980s.

Earlier research shows that computerized patient records change how physicians collect and interpret information about the patient. Differences are also found in the information recorded, and how it is organized in the record. Paper records often use a more narrative structure while computerized records organize data and information under various sub-headings. The narrative structure, for instance, consists of numerous and personal comments by the physician concerning the patient's condition. Differences in organizing the data and information in the patient record, in turn, influence the structure of the doctor-patient dialogue. Various studies have drawn the conclusion that new technology and the design of work tools and processes have an important influence on forming cognitive behavior among professional groups, e.g. physicians and nurses.

We have also observed that the introduction of computers in the doctor-patient relationship saves time from activities such as dictating. The computerized record presents more detail compared to the previously handwritten notations, and data are immediately available for different types of quality improvement efforts. A computerized patient record can also free the eyes and hands and create an opportunity to document better and more accurate information about the patient.

To contemplate

People have many stereotypical ideas about what a hospital is, and what it should look like. In concluding this chapter I would reiterate that we should dare to allow ourselves to be inspired more by design management theories, cognitive theories, and theories on the effects of color as we seek solutions to some of the many questions concerning what hospitals and information systems should look like in the future.

Design management finds itself at the intersection between management and design. The concept functions as a link between technology, design, design thinking, management, and marketing. Up to now, design has been viewed more as a way to express oneself and produce artifacts than as a strategic asset. Now design management has started to focus on design as a function that offers a method to lead an organization more effectively. Awareness about design as an important element of organizational strategy has increased.

Some aspects of design management are linked to knowledge management and theory about organizational learning, e.g. the importance of a coherent identity to apply one's knowledge in the best way. How well an organization learns, and how well it is perceived by those who work there, depends on what the facilities look like. Continuous feedback and improvement depend not only on the processes *per se*, but largely on where the processes take place. Hence, the goal of strategic design management is to integrate design, strategy, organizational identity, and culture.

Some theories on color suggest that harmony can be achieved by stimulating the brain through balance in the contrast of colors. The brain searches for complementary colors with the same brightness and saturation. It also searches for the contrasting values for each color. Furthermore, the brain searches for the contrasting intensity for each color. "Cool"

color usually refers to colors that are blue. Most people perceive bluish-green to be the coolest color. The warmest color is yellowish-orange. However, this is somewhat of an oversimplification since the perception of a color depends completely on the environment. Cool and warm colors can create a type of spatial image since people perceive cool colors to be farther away and warm colors to be closer. Contrasting the cool colors against the warm can produce a perception of light. Cognitive theories addressing visual importance are also of interest in this context, as are theories about creativity, but I will not explore this topic further here.

At various locations in the Nordic countries, different trials are under way for experimentation and new production concerning hospitals and information systems linking medical networks. For example, leaders from the new hospital in Trondheim have implemented the cluster concept. According to this concept, nurses are primary in the cluster, physicians are in treatment rooms, and administrative offices are near the entrance. All treatment takes place in the cluster. Patients are moved only for surgery and more advanced care. This is intended to reduce transport and save resources, e.g. time. Also, patients become more knowledgeable and better informed about what is being done, and they have better contact with the staff.

I would like to conclude by saying that patient records in their present form will disappear. Already today they are being integrated in information systems that modify and bind together multiple medical units. For instance, I have witnessed how computerized patient records can be used in working horizontally and vertically within an organization. This enables us to better coordinate activities and increases the quality of work performed. For instance, coordination can include data from more units in the information system than has been possible previously. This enables us to influence and streamline the

medical processes in the network. Using simple tools, such as images and symbols for various phenomena in the information system, can have a major impact. We can decide how much coordination we want, and how much we want to increase the quality of the work performed. This is an example of one way, beyond the most obvious, to think about and use tools such as a patient record. Consequently, a patient record is transformed from simply a place to store information about the patient into a tool for organizational development. The questions that should be asked are then: What units do we want to coordinate? What processes do we want to change? What is quality, and how much quality do we want to achieve? Finally, I would like to emphasize that what we can achieve with an information system depends entirely on the strategy we choose.

“If you ask people to define ‘value’ you will get different answers – monetary value, valuable objects, human value, or valuable memories. This chapter discusses value in the process where patients and the healthcare providers interact with each other. Value is not what the producers put in, but what the citizens take out.”



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Patient focused care – why should citizens put together the healthcare puzzle?

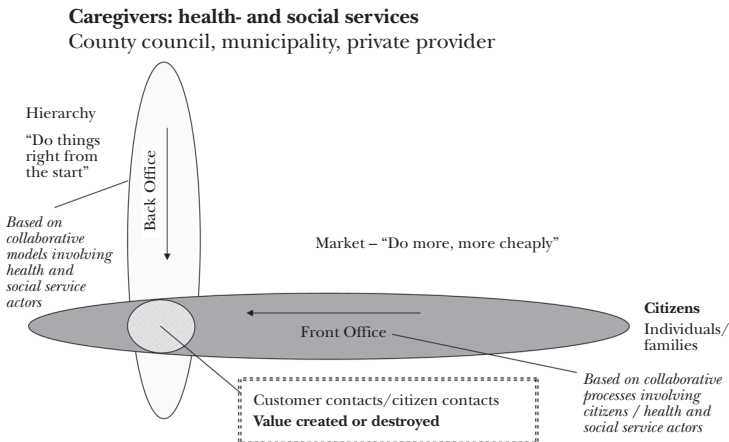
This chapter addresses the question of value – that which is valuable to me in situations where I, or those close to me, relate to people in the healthcare system. In this context, it is important to note that value is determined by what the citizens believe to be valuable – not by what the caregivers believe to be valuable. Value is determined by the citizens' utilization of health services, not by the producers of the services. Value is not what the producers put in, but what the citizens take out.

Once we have finally found an answer, or at least a preliminary answer, to the question of what the public thinks is valuable and less valuable in relation to healthcare, then the underlying question is whether technical solutions can guide patients through an increasingly complex system of caregivers. A system where traditional, hierarchical coordination does not function since caregivers have become increasingly fragmented, specialized, numerous, and mutually competitive about status and limited resources. In other words, hypothetically, health services that are more market-oriented cannot solve the question of who has the responsibility for – and who should cover the costs of – communication and coordination that support the public's concept of value. To the contrary, this question will increase in importance.

Focus on value

If you ask two people to describe value, you will probably get two different answers, e.g. monetary value, valuable objects, human value, and valuable memories. Perhaps their responses also deal with values and norms. This chapter addresses value as the process in which the public and healthcare interests interact to satisfy the citizen. Value was studied in terms of what the citizens expect from the healthcare process and the actual experience relating to that process. The following diagram illustrates the interaction between the public and the healthcare system.

Figure 1. The meeting between the citizen and the healthcare system.



The hypothesis in this chapter is that if the answer to the question of citizens' values is found in citizens' descriptions of their experiences, and if their descriptions explain what these processes actually look like (i.e. process mechanics), then researchers can begin to ask interesting questions about health and social service phenomena. The single most important research

question is: Why? Why does the health and social services system look like it does? What is the historical explanation for the current situation? This provides some insight into what we might do to effectively change the system, should we want to. But to answer the “why” question, we must begin at the right place, and the right place is to describe the shape of things.

This chapter is an attempt to understand the public, i.e. the *demand side* of the Swedish healthcare system. The aims are: to illustrate where, from the patient’s perspective, in the healthcare process there are problems/opportunities; and to identify what patients perceive to function and provide satisfaction, and what does not function and does not provide satisfaction.

A method called the *Critical Incident Technique* (CIT) has been used to gather empirical information via a standardized questionnaire. This method yields a selective, but deep understanding of a phenomenon. The respondent is asked to describe an incident that left the greatest impression in both a positive and negative sense a year ago. In this case, the question is: “When you think about all of your contacts with health services up to now, on what occasion did you feel the most satisfied/dissatisfied? Describe what happened in a way that relates what it was that made you feel satisfied”. The question is complemented by others: How long ago did the incident occur? On a scale of 1 to 5, how satisfied did you feel? How often have you experienced other incidents that created an equally high level of satisfaction/dissatisfaction? How dissatisfied have you been concerning contacts with occupational healthcare, your employer, and the health service? How well were you received, considering all of the different people and organizations you have had contact with in healthcare?

Healthcare process and the patient

The healthcare process is often described as *supply driven* rather than *demand driven* – those who produce health services are more important than those who demand health services. Reasons for this are historical and legal. Modern health services are associated with the advent of industrialism in the 1800s, (industrial) warfare, and the interest in treating wounded soldiers. An organizational context shaped to give and obey orders offers little or no opportunity for citizens to choose. Here it would be appropriate to add an etymological note:

- **Patient (adj.)** c.1320, “bearing or enduring without complaint,” from L. *patientem* (see *patience*). Noun sense of “suffering or sick person” is from 1393, from O.Fr. *pacient* (n.), from the adj., from L. *patientem*. Harper, David “ONLINE ETYMOLOGY DICTIONARY, November 2001.
- **Patient (noun)** 14th century. **1 a:** an individual awaiting or under medical care and treatment **b:** the recipient of any of various personal services? **2:** one that is acted upon. Merriam-Webster Online Dictionary, 2009.

The word *patient* dates back to the 1500s in Sweden, and back to the 1300s in England. As is often the case in Europe, the origins of the word are found in Latin. Clearly, the meaning of the word has been stable over the past 500 years – a person who suffers from some malady becomes by definition a patient when contact is established with someone who treats him/her. Those who choose to manage their suffering themselves are not patients. Herein, one could argue, lies the crux of the issue. If I hand over my suffering to another person for that person to bear, do I hand over all of my autonomy, or only certain parts of it? When does this potentially confining situation for my autonomy commence, and when does it cease?

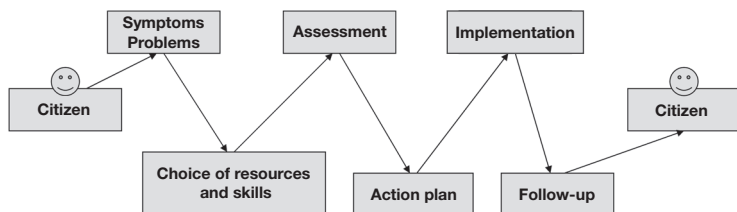
It would appear that my situation as a patient in the health-care system is described, considered, and acted on as if I were a passive recipient of something from a service provider – a service provider who relieves my suffering, but in return seizes my autonomy. It would appear as though my role as a co-creator is underdeveloped; that the tools and knowledge that would enable me to help myself deal with my suffering are underdeveloped. In other sectors this role is becoming increasingly important for two reasons: rationalization and risk minimization. If citizens/customers participate in developing services, then productivity increases, thereby limiting the possibility of inventing new services in which the citizen/customer has no interest.

Health services, consequently, have developed a situation of “information symmetry” between the recipients of health services and the producers of health services, depending on advancements in medicine and science, but also for other reasons. The opportunity for recipients of health services to make wise, well-informed choices is hence associated with a cost to the citizen. One would have thought that the introduction of information technology (IT) tools, e.g. personal computers and cell phones, would have changed this situation, but that is not the case. Due to competition among different groups in healthcare, computer systems have been developed for a limited number of users – with no access to the system for other people in the healthcare system, or for citizens. One Stockholm hospital includes over 200 computer systems, most of them not interlinked. By no means is this situation unique.

The introduction of information technology has substantially impaired the interaction between citizens and health services. The reason (beyond the fact that physicians and nurses now sit and stare at computers instead of citizens) is that every interaction becomes the first meeting where no previous history exists, unless a personal relationship is estab-

lished – a relationship that both parties remember. To clarify, a *process* does not exist when it comes to disseminating information. What exists is several disparate parts, as illustrated by the following model.

Figure 2. The healthcare process.



The process consists of six activities. It begins with the citizen discovering a symptom that indicates a problem and then contacting the health services. A caregiver listens to the citizen’s story and defines a medical problem based on that story. The presumed goal is to free the citizen from symptoms, enabling him/her to return home or to working life. The presumed goal of the caregiver is to solve the medical problem and produce a satisfied, happy citizen.

Back to the word *value*. The definition, consequently, is a clearly defined “co-creative” process in which the citizen is satisfied with a process that cures the symptoms, and the caregiver is satisfied with a process that solves the problem. Symptoms (satisfaction) and problems (quality) are two interwoven tracks that together create value. Value is created when the citizen’s problem is solved (something that often requires medical expertise) in a way that makes the symptoms disappear.

Back to the *process*. Once the problem is defined, the next phase is to choose resources and skills to solve or ameliorate the problem and provide resources and skills at a cost in monetary terms. Primarily, actors in the health services do this. They establish a plan of action and implement the plan

through collaboration between the citizen and caregivers. The process concludes with follow-up where citizens and caregivers can confirm that the symptoms and problems have been resolved.

Healthcare process and “Business Process Engineering”

Interest in process innovation began in earnest with researchers Michael Hammer and Thomas Davenport. Ideas concerning process innovation in the United States came from Japan and the Japanese automobile industry, which outpaced the American automobile industry in the 1990s via the *lean production* philosophy. The fundamental idea became known as *business process reengineering* or BPR. This concept consists of two interrelated ideas; internal collaboration and external customer orientation, both enabled by information technology. Formulated in another way, an organization that initiates process innovation via BPR believes that the application of information technology can help solve problems of internal collaboration and deficient customer focus. Although BPR acquired an unfavorable reputation in the late 1990s, it has survived and since 2002 has reemerged via interest from public sector in Europe.

Application of a process perspective in the healthcare sector has focused on several variables rather than on a specific problem, specifically:

- Resource reductions
- Increased citizen/patient demands
- Long waiting times
- Access to health services
- Delivery of health services
- Malpractice

To date, studies in the area appear to show that the use of process innovation is a way to address internal problems in health services rather than problems concerning customer focus.

The study

The study included the *critical incident technique* (CIT) and standardized questionnaires. One of the major differences between the two is that CIT assumes that a single critical incident, i.e. a very satisfactory or a very unsatisfactory event, is accorded high priority in an individual's overall judgment of a provider. The standardized questionnaire method assumes that this overall judgment is shaped by the accumulated experience of the provider's performance, which includes critical incidents, expected performance levels, and minor incidents that give rise to dissatisfaction or unexpected satisfaction.

As mentioned above, in this study the citizen plays the role of patient. More specifically, the subjects are *sick listed*, i.e. absent from work due to health reasons. When sick listed, patients encounter four different types of organizations: the employer, the social insurance office, occupational health services, and other health services.

Citizens/patients in this study must deal with multiple organizations while sick listed. This context presents a higher degree of complexity in comparison to many other studies on consumer perceptions of service vendors, given that the typical study focuses on a single vendor. The context, however, is not unique since from the consumer's perspective many services delivered by a single vendor are actually part of a larger system. Travel, for example, may require interacting with offers from airports, airlines, hotels, and car rental firms. Earlier research on satisfaction has used CIT in patient situations. Some authors argue that the method, and not a standardized ques-

tionnaire, is particularly applicable in such a context. Questionnaires have been used to collect data on critical incidents, perceptions of attribute-level performance, and overall satisfaction. We sent this questionnaire via post to individuals who were sick listed according to registers at a specific hospital that we collaborated with to gain access to patients. The study included 222 patients.

Critical incidents and satisfaction

We collected data on both positive and negative critical incidents. Regarding positive incidents, we asked respondents to think about the entire period they were sick listed, and try to remember if they were especially satisfied with a particular incident during that time. If the response was affirmative, the respondent was asked to give a verbal description of the incident. To estimate the degree of satisfaction, we asked the respondent: “How satisfied were you when this happened?”. The response format offered three options, i.e. *somewhat satisfied*, *satisfied*, and *very satisfied*. The same approach was used to capture data on negative incidents, but in this case the question was: “How dissatisfied were you when this happened?”. Again, the response format offered three options, i.e. *somewhat dissatisfied*, *dissatisfied*, and *very dissatisfied*. It should be noted that the typical CIT study does not capture separate information about the degree to which an incident causes satisfaction or dissatisfaction, although this information is necessary to investigate the association among different variables (in this case between the degree of satisfaction created by a critical incident and the overall degree of satisfaction).

The respondents were also asked when the reported incident occurred. Here an open-ended question generated data on the number of weeks that had elapsed between the incident

and participation in the study. The typical CIT study does not generate such data – despite the fact that a long period may introduce memory-related errors. However, in this case – as regards both positive and negative incidents – the correlation between incident-generated satisfaction and the incident-time measurement approached zero and was not significant. However, these low correlations indicate that the respondents' levels of satisfaction and dissatisfaction with the specific incident reported appear to be dependent on when the incident occurred.

As regards attribute-level performance, we asked the respondents to appraise the performance of each of the four actors (employer, social insurance office, occupational health services, and other health services) they encountered during the sick-listed period. In reference to each actor, the respondents were asked how they perceived their treatment on the whole. We used a 5-step scale ranging from 1 (*very poor*) to 5 (*very good*) for each actor. Hence, we treated each actor as an aggregate attribute of the system that the patient interacted with during the sick-listed period.

Overall satisfaction was estimated by asking the respondents to rank how good they thought their overall treatment had been during the sick-listed period, taking into account all of the people and organizations they encountered during the process. Again, we used a 5-step scale ranging from 1 (*very poor*) to 5 (*very good*) for each actor. Analysis of the response distribution indicated that the data reflected the typically skewed distribution that characterizes overall satisfaction in many questionnaire studies: only 5.5% of the respondents selected the two indicators of dissatisfaction. Hence, the overall satisfaction variable showed a pattern similar to satisfaction measures in previous studies, indicating at least some level of validity for this measure.

Content analysis of critical incidents

Content analysis showed that 121 of the 222 respondents answered the question on describing an incident that caused major dissatisfaction. They generated 5105 words. Twelve people responded NO to this question. Five respondents gave answers that could not be interpreted.

More respondents, 131, answered the question on describing an incident that resulted in major satisfaction. They generated 3408 words. Eleven people responded NO to this question. Four respondents gave answers that could not be interpreted. In many cases the respondents are one and the same individual.

The respondents were given a 3-grade scale ranging from 1 (*somewhat satisfied*) to 3 (*very satisfied*).

In mapping the critical incidents in the healthcare processes described above, the following results were obtained from the 104 *dissatisfied citizens*.

Problem	5 people, 4.8%
Choice of resources and skills	38 people, 36.5%
Assessment	6 people, 5.8%
Action plan	6 people, 5.8%
Implementation	9 people, 8.6%
Follow-up	39 people, 37.5%
Entire process	1 person, 1%

In mapping the critical incidents of the healthcare processes described above, the following results were obtained for the 116 *satisfied citizens*.

Problem	5 people, 4.3%
Choice of resources and skills	29 people, 25%
Assessment	11 people, 9.5%
Action plan	7 people, 6%
Implementation	26 people, 22.2%
Follow-up	8 people, 7%
Entire process	30 people, 26%

There are clearly asymmetries between the positive and negative incidents. The negative incidents center on two parts of the process, *choice of resources and skills* and *follow-up*, while the positive incidents concern the *entire process* and *implementation*. Another way to express this would be that *citizens are satisfied when there is a process* and *citizens are satisfied when their suffering is relieved*. Value is created when the story has a painful beginning and a painless ending, and when the ending is happy. For a beginning and an ending to exist there must be a coherent process where a happy ending can be produced, or even well-produced. Viewing a single episode of a drama does not make a convincing film. The film needs a director who knows how to send in the right actors at the right time. *Citizens are far from satisfied when their caregivers do not “communicate” among themselves, or even worse when they argue. Citizens are far from satisfied when there is no end to the process.* If the actors (caregivers) do not know how the story goes, if there is no script, or if they do not read the script, then value is not created for the citizen with respect to what the citizen wants from the process. The role of the citizen as patient will be “delivered” for exactly the same reason as a happy or unhappy ending delivers a story.

The symmetries are also striking. They concern the *problem* aspects of the process and the *action plan*.

The power and eloquence of the stories are illustrative of the citizen’s satisfaction and dissatisfaction with the healthcare

process. Service attributes that are important to the citizen are clear.

Attributes for satisfied citizens are:

- Rapid and precise treatment.
- A personal relationship with healthcare institutions and individuals who lend professional support – a director, a doctor, a nurse, a municipal coordinator, a case manager from the social insurance office are often mentioned by name. “Being able to continue my sessions with ‘my’ psychiatrist; that’s my lifeline and helps me realize that I have a responsibility for my life.”
- Time for dialogue with healthcare institutions and individuals. “When X at Y had time and listened to me for three and a half hours, and even walked around the table to give me a big, warm, safe hug when I talked about ‘heavy’ experiences that weighed me down.”
- A non-patient status, i.e. when healthcare institutions and individuals allow citizens to control the process to the extent possible.
- Teaching. “Am particularly satisfied with my medical specialist who has taken time and given me ideas worth considering”. “When my previous doctor arranged for me to attend a course to gain basic knowledge about my body.”

Attributes for dissatisfied citizens are:

- Little or no communication from healthcare institutions and individuals. “The director is, and has been, invisible the whole time [during sick leave]. I feel powerless after all these years with the company. I’ve loved my work and given my life, my time, and my health.” “The social insurance office. No contact for two years, then suddenly I get a letter stating that I should contact them. I tried to reach her for a

week, but she never called back. I was forced to call her boss, and then she called back.”

- Mistrust of the sick-listed individual’s “story” by healthcare institutions and individuals; particularly by directors and the social insurance office.
- Conflicting stories from healthcare staff and the employer. “When my doctors say that absolutely I should not follow the instructions I received from the therapist. The doctor and therapist work at the same hospital, and their offices are next to each other. What cooperation!”
- Disinterest in adapting work tasks and/or situations to support someone who returns from sick leave. “My boss thinks that I should go back to my old job and wasn’t interested in assigning me other tasks.”
- Long waiting times. “After much hesitation, my doctor sent me to a lung clinic. Then I had to wait for 15 months for an appointment. My asthma became much worse during this time, and I felt helpless. Several times I tried to schedule an appointment, but when you are as sick as I was you just don’t have the strength.”

Results – integrated care process means satisfied patients

The results indicate that the experiences from the process are both favorable and less favorable. The common question from the content analysis of critical incidents concerns the relationships between and among healthcare actors that generate both good and bad incidents. What is remarkable is that the issue is not access to the process, but resource planning. How then can the citizen gain greater control over resource planning, and/or how can caregivers horizontally integrate resource planning? A solid hypothesis is that the process needs a “director”,

i.e. currently a role is missing, one without which we cannot have a good ending to the story, or perhaps not have a story at all.

As regards the fundamental question of process orientation, or more precisely, the question of citizen orientation, the results indicate that it is not a matter of one “encounter”, but a matter of many, often too many, encounters. The many encounters between citizens and numerous uncoordinated service vendors. It would appear that coordination rests largely with the citizen, and citizens view this as an unshared burden on top of their already existing suffering. If this is the case, then the simple questions are: *When, how, and why* has this distribution of work emerged? The textbook answer is crystal clear. It has always been this way and will always be so. In a hierarchical organization the internal processes are more important than the environment’s demands for efficiency, rationality, legitimacy, and transparency. A hierarchical organizational structure has many advantages, but it is functionally based and finds it extremely difficult to manage changes in its original functional approach.

Discussion and implications

The question remains: What roles do new technologies and new routines play in the process where citizens encounter health services? Can they help put together the entire care episode, or will patients need to do this themselves even in the future? The literature on new technology as a tool to change and develop organizations is clear – new technology, primarily information technology, is a powerful change agent. However, the manageability of this change agent is limited. Since information technology, *per se*, is completely context free, the context determines how change occurs.

New technologies, particularly mobile services, can hypothetically facilitate citizen dissatisfaction with the process in two ways: first, by giving citizens oversight and control of the entire process so that gaps within and among activities become more visible and understandable; and second, by supporting collaboration among healthcare actors. The results are clear as regards the need for ownership over the healthcare process, i.e. someone should own the coordination of the process.

The results indicate that the relation between the patient/family and healthcare actors is temporary – there is no process, its absence is conspicuous. Patients who establish a personal relationship with healthcare actors often have a positive experience in the healthcare process. They succeed in this way, if not in the process then in episodes that create value. Patients who do not succeed in creating such a relationship tend to have a neutral or negative experience in the process, or might construct a process more or less on their own. As long as this is the case, the potential of information technology is limited and perhaps even of negative value to citizens.

“ *We cannot complete the healthcare puzzle by focusing only on the individual pieces. We must also focus on the glue that holds them together. A major challenge facing health services is to improve horizontal management, which involves collaboration in different forms as a complement to important vertical economic control.* ”



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How can we complete the healthcare puzzle if leaders only cut out the pieces?

On economic control and interorganizational collaboration in the continuum of care

A common perception in the mass media in Sweden and abroad is that money has been accorded too much importance in the healthcare sector. The public sector needs to save money, which impacts negatively on weak and vulnerable groups. Time and again we see headlines blazing in the daily news describing some unfortunate situation. Repeatedly, we see examples of how the elderly have fared badly and fallen through cracks in the system – for instance, pensioners who have been bounced back and forth between their home and a healthcare facility. In Sweden, the county councils and the municipal governments have been criticized for not living up to their responsibilities.

As early as the 1990s Sweden introduced a reform (the *ÄDEL* Reform) that shifted much of the responsibility for eldercare from the county councils to the municipalities. A central feature of the reform was the clarification of boundaries between areas of responsibility of the municipalities and the county councils. Swedish municipalities were tasked with integrating health services and social services. Despite the reform, there are still many interfaces between the two govern-

ing bodies in eldercare. These interfaces place considerable demands on coordination and collaboration between different individuals and units in the municipalities and county councils. Sweden is not unique in this context. Different countries have different organizational structures, but international studies indicate a substantial need for collaboration across organizational boundaries in all parts of the world. We have studied how the county councils' community health centers and the municipalities' home care units in Sweden need to adapt to each other to create positive care experience for pensioners.¹ As described by one of the home care nursing assistants in our study:

Any disagreement about the schedule creates a poor climate between the nurses and us. And that's not good for the pensioners. At times, the things that need to be done do not get done because we cannot agree on a time. But the nurses must take their responsibility; we cannot always be the ones to give in.

Staff at the community health centers expressed similar opinions. One assistant nurse explains:

It's not good at all. At times, patients receive their medication too late because no one goes to get it. We [assistant nurses and

¹ A doctoral dissertation by Kalle Kraus serves as the basis for the discussion in this chapter. Kraus, K, 2007; *Sven, interorganizational relationships and control – a case study of domestic care of the elderly*; doctoral dissertation at the centers for accounting and business law, Stockholm School of Economics, Stockholm, Sweden. The dissertation presents an extensive empirical case study of eldercare and is based on interviews with 78 individuals and on internal and external documents, e.g. annual reports and minutes from meetings. Several different types of professionals associated with eldercare were interviewed: controllers, financial managers, case workers, directors of home services, nursing assistants, directors of community health centers, nurses, and assistant nurses.

nursing assistants] do not talk with each other, or there is misunderstanding. We need to communicate better with the nursing assistants, and we need guidelines for the gray areas. Now we blame them, and they blame us.

Parallel with this, directors and staff from municipal home care services and county council community health centers emphasize the importance of meeting the economic targets for their respective organizations. A director of home services elaborates:

For our part, it's about having a balanced budget. A balanced budget is the issue on the agenda, and everything focuses on that. There's no discussion about developing new things; that needs to come later.

Other executives offer similar descriptions. One director of a home service unit states: "*Money is a major driving force, it really is. The three most important parameters I'm evaluated on? Budget, budget, budget.*" Several executives also emphasize the importance of getting the nursing assistants to understand the importance of money. A director of home care services says:

The nursing assistants must understand that a deficit of 300 000 Swedish kronor means one less employee for us. This connection between the budget and their salary is important. They must also know that our revenue comes from the decisions on aid/assistance. For this reason, nursing assistants have been forced to take interest in financial issues.

The descriptions show that *vertical economic control* has had a major impact on what happens in eldercare and other parts of the healthcare system. To assure their continuing existence, nursing assistants, assistant nurses, nurses, and their directors reiterate the importance of holding their local units within designated spending limits. Primarily, this encourages them to

prioritize their units' activities, and then hopefully helps them consider how their actions harmonize with those of other actors in healthcare. Putting together the complex healthcare puzzle becomes problematic if leaders simply cut out the individual pieces. This can be compared to the situation before vertical economic control became so influential. A nursing assistant describes: "*It's not at all appropriate to discuss finances or think in economic terms in our group. The pensioners must always come first.*" Adapting to the county councils' community care centers worked well, and pensioners' needs were always the focus. One of the nurses stated: "*There was a good feeling when we spoke with the nursing assistants. We all focused on the pensioners.*" Nursing assistants, assistant nurses, and nurses felt free to provide the care that pensioners needed and reported no major pressure or attempt from directors to micromanage.

An important conclusion from the previous description is that one of the problems affecting today's health services can be linked to stringent, vertical economic control and its effect on the actions of staff. According to some critics, this vertical economic control leads different organizational units to think only about their own outcomes. Thereby, each unit optimizes its part of the whole, and the units act as small self-sufficient islands isolated from each other. They claim "things were better before", when vertical control did not have such a strong influence on the organization, and thereby did not destroy the opportunities for the municipal and county home health services to adapt to each other. It is not only about coordinating activities, but linking resources and skills to each other.

In our opinion, the criticism directed at vertical economic control is too one-sided and general. It is not meaningful to assert that vertical economic control is at fault because the weak elderly fall between cracks in the system. After all, economic control is only one tool that politicians and senior executives can use to push employees in a particular direction.

Owing to that, politicians and senior executives can achieve change in the municipalities and county councils. It is time to refine the debate on managing health services.

To start off, we need to clearly conceptualize what we mean by management. Thereby, it will become easier to identify the important aspects that should be considered in shaping management in the healthcare sector of the future. We believe that management, in a broad sense, can be viewed as two parallel processes: a *vertical control process* involving the owner, executive team, and employees and a *horizontal management process* involving the employees producing the services and the users of the services. This way of defining management means that those who provide health services are exposed to two different types of control processes based on different rationales. The vertical process is based on a financial rationale; meaning that organizations are viewed as financially defined units. The horizontal process is based on an organizational rationale based in the production process itself. Here the collaboration issue becomes important since production usually involves many inter- and intradependencies. Consequently, collaboration among the various units is of prime importance for the user's overall care experience.

Taken together, this means that an organization will always be exposed to vertical and horizontal control processes. However, these processes can be more or less influential at different times, depending on where politicians and senior executives place the emphasis in management. We believe that the key to successful management in healthcare is finding the right balance between these processes. Allow us develop this by using a study addressing vertical and horizontal control processes in eldercare. The study has been limited to vertical control in the municipal sector. Below we describe three episodes where the emphasis in vertical and horizontal control processes differs.

Episode one: “Weak vertical economic control and substantial informal horizontal management”

Looking back a few decades, many of those interviewed indicate that municipal eldercare was characterized by weak vertical economic control. The budget often had no major importance. When directors budgeted for the next year they based their projections on the previous year and made only minor changes to adjust budgets to the revenues expected in the upcoming year. One of the home care directors interviewed stated: “*The budget process was only a formality. No one paid much attention*”. Budget monitoring was of equally limited importance, and when units needed more resources they simply demanded more money. A home care director describes: “We met with the director twice a year and discussed how we were doing financially. But I never felt any pressure to keep the budget balanced.” The disinterest in vertical economic control is clearly expressed by a newly recruited home care director:

When I started working I was really chocked. The home care unit had overrun its budget for several years. This surprised me since I'd operated my own business and knew that revenues had to exceed costs. I asked the director who preceded me, but she only said that they always had budget overruns. You could say it was built into the system. I was speechless.

Parallel to this, formalized horizontal control was also weak. Few administrative management tools supported coordination between the home care units and the community health centers. However, there was strong, informal horizontal control that focused on the needs of the pensioners and the importance of creating a high-quality care experience. Pensioners' homes were viewed as the natural organizational unit, and here the nurses served as team leaders. Hence, the nurses

coordinated the work and prioritized activities. One of the nursing assistants describes: *“The nurses were the ones who were most knowledgeable and had the broadest overview. They knew what needed to be done and who should do it.”* A nurse expressed a similar view:

The nursing assistants trusted us more than they trusted their directors since we had the medical knowledge. It was really good for the patients that we decided what should be done and how it should be done.

A problem that became increasingly acute was that the units responsible for eldercare in the municipalities we studied reported major financial deficits. Weak vertical economic control in combination with relatively strong and informal horizontal management meant that the home care units provided considerably more care to pensioners than what they were reimbursement for. The nursing assistants provided more home services than what had actually been authorized. Further, it was mainly the nursing assistants who adapted to the nurses and the assistant nurses from the community health centers. This means that the nursing assistants had to expend some of their time waiting for the nurses, and they had to travel between the different pensioners' homes. The solution recommended to address the major financial deficits was to emphasize vertical economic control in a completely different way. Connected to this were changes in personnel at the executive level. Episode two describes this situation.

Episode two: “Strong vertical economic control and weak horizontal management”

In episode two, the municipal health services are characterized by strong vertical economic control and a sense of financial cri-

sis. Substantial emphasis was placed on the budget both in planning and in monitoring, and it had a major impact on daily activities. All categories of staff were engaged in financial control, from nursing assistants to home care unit directors to central-level executives. One home care director states:

I very clearly inform the nursing assistants that they can do only what the entitlement decision has authorized, nothing more, nothing less. They must say no if the pensioners ask them to do extra things. Everything has to be authorized in the decision so we can be reimbursed for it.

A nursing assistant describes:

We can really see that our director is hard pressed by the senior executives. She is very stressed about the budget; it must be extremely difficult to be a director in these times.

Parallel with the greater emphasis on vertical financial budget control, several other administrative mechanisms have been developed to support vertical economic control. These include executive training, regular meetings between controllers and home care directors, sanctions on directors that do not meet their budgetary targets, regular review of entitlement decisions, detailed guidelines for nursing assistants, and financial discussions with nursing assistants.

Strong vertical economic control enabled home care services to overcome the financial crises. They successfully balanced the budget and have operated for several years with a financial surplus. This strong vertical control was combined, however, with weak horizontal management. Horizontal management was not supported by any administrative mechanisms, and the earlier informal horizontal management that had dominated the delivery of services in pensioners' homes could not withstand the strong vertical control. The interviewees describe that increased emphasis on the vertical control proc-

ess led to substantial deterioration in the coordination between the county council and municipality and thereby a deterioration in the pensioners' total care experience.

The nursing assistants, assistant nurses, and nurses emphasized that two groups were present in pensioners' homes. Nursing assistants comprised one group, while assistant nurses and nurses comprised the other. A nursing assistant explains:

In our group we tell each other that we will help the nurses give medications as instructed, but we will not take orders from them or run their errands, or always adapt our schedules to theirs. We are responsible for home care, not health services.

Consequently, the norm that emerged meant that both groups focused on their own tasks, and they viewed collaboration as a low priority. The group mentality was to blame each other for poor collaboration, and the collaborative atmosphere was described as frosty.

The general picture conveyed by this episode is that collaboration was poor, and there was a negative atmosphere between the community health centers and the home care units. Nursing assistants, assistant nurses, and nurses described difficulties in coordinating activities that require collaboration. Everyone called for clearer direction and clearer routines concerning who should do what. Both parties often disagreed on the time when nurses should change wound dressings. Specifically, nursing assistants must shower the patient, so they and the nurses must agree on a time that fits the schedules of both. Interviewees also identified pensioners who had not received breakfast on time following an insulin injection, resulting from poor communication between home care and home health services. Both parties blamed each other and claimed that the other did not adapt.

To summarize, the second episode was characterized by strong vertical economic control that emphasizes and requires

balanced budgets for the individual organizational units. This, in combination with no horizontal management, leads to an imbalance in the organization. That which is emphasized is that which is measured and rewarded via financial monitoring. This means that the units' internal concerns receive all of the attention at the expense of collaboration between home care and home health services. One way to address this situation would be to strengthen horizontal management to create a counterforce to vertical economic control and thereby achieve better balance between the two different control processes. Achieving better balance in management creates the conditions for well-functioning collaboration between the home care units and the community health centers. Episode three describes such a situation.

Episode three: "Strong vertical control and greater emphasis on horizontal management"

In episode three, the municipal eldercare services have experienced a financial crisis that resulted in strong vertical economic control, and they later succeeded in achieving better control over their financial situation. For the past several years, the unit has been characterized by continuously strong vertical economic control. One director explains: *"I want to point out that we have a major focus on the financial aspects in our part of the city. We are working actively to make all staff members aware of economic issues."* A director of home care agrees: *"I think that the nursing assistants are tired of hearing me constantly talking about money. But they know that we must be aware of the financial situation."* In contrast to the two previous episodes, however, strong vertical economic control is combined with a somewhat stronger formalized horizontal management. Several control mechanisms have been developed to support collaboration

between home care and the community health center. The horizontal mechanisms include intervention groups, monthly meetings between nursing assistants and nurses, and specific guidelines on how collaboration should function. All directors emphasize that intervention groups are important for collaboration between home care and home health services. The groups meet four times per year, and most of those who participate in the meetings are nurses, community health center directors, and home care directors. The meetings serve as a forum to discuss issues viewed to be problematic in the collaborative relationship. A home care director relates:

The intervention groups have developed well. It's important that we do the same in every part of the city since the community health centers often work with several different home care units. Even if some gray areas remain, the intervention groups improve collaboration.

The community health center directors agree. One of them describes:

The intervention groups are particularly interesting. My health center works in two parts of the city, but we have an intervention group in only one of them. There we have an effective structure, it works very well and my nurses meet the nursing assistants regularly. It is particularly important to collaborate. The intervention groups are good, and important, and I believe that this is the reason why things work so much better in that part of the city.

The directors also require the nursing assistants and assistant nurses to meet once per month, and then the nurses visit the offices of the nursing assistants. Each nurse meets the nursing assistants that visit her/his patients. The meeting is important for sharing information about the pensioners, and pensioners whose health status has changed are always discussed at the

meetings. The nursing assistants, assistant nurses, and nurses all say there is a common view that collaboration is important for eldercare to function well. There is a mentality of helping each other and being flexible in providing care. A nurse explains:

I really like the atmosphere that we have together with the assistant nurses and nursing assistants. Collaboration is important and must be focused on. I speak often with my colleagues from other parts of the city, and they often have a different experience. But here, all of us believe that collaboration is important to provide good care for the patients.

Day-to-day coordination of care is said to function well. One assistant nurse says: *"It works perfectly. Let's say that we need to change the dressing on a leg wound; when I arrive the patient is sitting there, newly showered, thanks to home care."* Coordination is also discussed at the regular meetings. A nursing assistant explains:

It works really well; we help each other. They [assistant nurses and nurses] call us, it's easy to agree on times, and it also seems like they often adjust their schedules. Sometimes we are nice and change our schedules, and sometimes they do it – a good atmosphere.

To solve unexpected problems, both partners do things that are actually the responsibility of the other partner. Reasons given for the well-functioning, day-to-day coordination of care include the monthly meetings between nursing assistants and nurses and the specific guidelines for collaboration developed by intervention group. During the meetings participants exchange information, determine times for joint home visits, and agree on times for the interventions that need to be coordinated. The meetings are also beneficial in that both parties come to know each other better, creating a positive atmosphere in the relationship. Symbolic value is also attributed to

the fact that the nurses meet in home care's offices. "*It's important that they come to our offices, it shows that they too can adapt*", says one nursing assistant.

To summarize, episode three describes a situation where strong vertical economic control is combined with increased emphasis on horizontal management. A structure for collaboration has been constructed during a period when the units had been spared from financial crises.

Conclusions

A characteristic of health services in Sweden, and internationally, is the interdependence among specialized units in many aspects of care delivery. This is further complicated by the fact that these units often have different governing bodies and different financial resource bases. Collaboration that functions well is therefore of central importance for quality of care, efficient utilization of resources, and the users' total care experience. Here, management plays a key role. An important challenge facing healthcare in the future will be to design vertical and horizontal management that generates desirable behavior in the long term – behavior that conserves scarce resources and enables collaboration across organizational boundaries. The healthcare puzzle will never be completed if leaders only cut out the pieces. We see a major need to achieve structure in the discussions addressing management. We have argued that an important step is to conceptualize management as consisting of two parallel control processes; a vertical process and a horizontal process.

Referencing three episodes, we illustrated how different emphasis on the vertical and horizontal control processes can strongly affect care delivery. In the first episode, vertical control was nonexistent, leading to large economic deficits and

deficient prioritization of resources. Such a situation can continue only as long as politicians accept constantly supplying more resources. In this context it is important to note that the publicly financed healthcare sector has certain distinguishing features compared to for-profit corporations with paying customers and other parties. Such a feature is that public organizations are not aimed at making a profit; they exist to serve a “social” function in society. Quality of the services is a goal *per se*, and there is always a bottomless pit in which to pour money. New areas of utilization appear as soon as new money is added. Consequently, there is a need to prioritize how we want to use our common resources. Vertical economic control is an important way to assure that decentralized units do not utilize more resources than they have at their disposal.

The vertical control process should not, however, dominate totally, as episode two illustrates. Then only the internal processes in the different pieces of the healthcare puzzle would receive attention, and the collaborative aspects would fall by the wayside. We see obvious signs of this in episode two where collaboration between home care and home health services are perceived to function poorly since the units prioritize only their own internal concerns, not the total care experience of the pensioners.

The great challenge facing healthcare is therefore to develop the horizontal management process as an important complement to strong vertical control. We use eldercare as an illustration, but similar thinking can be applied to other services, e.g. acute care and psychiatry. The basic configuration of different specialized units with different budgets is common in most organizations. Eldercare, however, could serve as pilot case to penetrate important issues concerning collaboration, and then could be adapted to the conditions in other areas of activity.

We cannot continue to put together the healthcare puzzle by focusing simply on the individual pieces. We must also consider the glue that holds the pieces together. New, innovative control mechanisms are needed to strengthen horizontal management. Episode three presents examples of such control mechanisms, e.g., intervention groups comprised of people from various interdependent units, meetings between nursing assistants and nurses, and guidelines for collaboration. Much more remains to be done. Should home care units face another financial crisis we could ask ourselves how this would affect collaboration with the community health centers. In such a situation there could be a need for even stronger horizontal control that highlights the need to collaborate with community health centers. Hence, horizontal management needs to be strong enough to withstand internal economic crises. Mainly it involves setting goals, measuring, and following up aspects in the horizontal dimension. Currently, health services tend to measure and monitor only the vertical dimension.

In a time of cutbacks and financial crisis, both vertical and horizontal control need to be manifested in different ways to reduce the risk of units focusing only on their internal concerns. Here, much of the responsibility falls on directors at different levels. For instance, nursing assistants and nurses in eldercare cannot be expected to solve all of the coordination problems that arise in the pensioners' homes. We highlight the need for formal horizontal management mechanisms that contribute toward setting the focus on collaborative issues. This might involve developing a well designed and defined organization for collaboration where the parties meet regularly. Which levels in the hierarchy need to meet? What should the respective levels decide on? By creating a distinct organization for collaboration, and introducing regular meetings between the directors and the caregivers, the executive level communicates that priority should be placed on collaboration.

Once this foundation is in place, it becomes largely a matter of clarifying the rules of the game via guidelines, establishing goals and measures for collaboration, and monitoring how well these are fulfilled. It should be noted that none of the three episodes include formalized measurement and follow-up in the horizontal dimension. In the vertical dimension, however, the respective units are continuously measured and followed up. Such an imbalance presents an ongoing risk that collaborative matters fall by the wayside. This is where the health-care sector needs new, innovative thinking. We believe it is also necessary to clearly measure, follow-up, and demand responsibility in the horizontal dimension. If the individual units know that they are not only being evaluated on the extent to which they balance their own budgets, but even on how well (using concrete measures) they collaborate with other units, then the collaborative issues will probably take on a whole new importance. It can also be emphasized that different control mechanisms can reinforce each other. The work of developing concrete local goals, measures, and standards for collaboration over organizational boundaries enables the different units to meet and discuss these matters. This can also improve collaboration since values, norms, and common cultures are created that emphasize the importance of cooperating.

Finally, it is important to raise the issue of the need to further emphasize horizontal management. Goals, measures, standards, and monitoring of collaboration constitute an important foundation, but financial incentives in horizontal management are also probably needed to successfully deal in times of internal financial crises. This is because of the strong financial incentives affecting the vertical control of individual units resulting from the pressure to keep the budget in balance. Financial solutions that reach across unit boundaries are often difficult to design, but these aspects should nevertheless be addressed in the current healthcare debate since clearly

more attention is now being focused on the importance of utilizing common resources as efficiently as possible. Strong vertical and horizontal control not only places greater emphasis on the individual pieces of the healthcare puzzle, but also on the glue holding the pieces together to create the whole.

“*In contrast to the current debate on the challenges of evidence based management, our approach highlights problems other than the lack of evidence and difficulties in implementation. Empirical studies of evidence based management suggest that, in practice, more evidence does not automatically make it easier to apply evidence based management.*”



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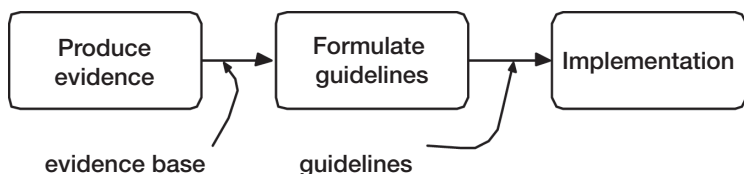
Wisdom necessitates doubt – the problem of evidence based management

There is a strong and growing confidence in using evidence based medicine (EBM) as a tool for guiding healthcare services. Generally, the concept of EBM involves systematically compiling – at a central level – high-quality evidence on the best treatment methods and disseminating the findings to care settings where these methods will be used. The goal of using the evidence base to determine the content of health services is to achieve all of the positive features attributed to “appropriate” healthcare: high quality, cost-effective, and individualized care.

Although many advocate that evidence based management (EBMgt) is valuable, there are clearly indications that it is not all that easy to manage on the basis of evidence. Two problems in particular often arise in public discussions. The first concerns the difficulty of getting practitioners to accept, and act in accordance with, the best evidence. The second problem concerns frequent gaps in the knowledge needed to determine what should be done in different situations. Neither of these problem areas questions the fundamental idea behind EBMgt. To the contrary, they reinforce the idea that EBMgt input should increase further. The argument is that greater efforts to apply EBMgt ought to narrow the unfortunate gap between best evidence and current practice, and it ought to increase

pressure to pursue evidence in those areas where evidence is deficient.

Figure 1. A schematic of evidence based management.



Our argument is that it is too simplified to define the main problems of EBMgt as a deficient evidence base and a lack of will among practitioners to use the evidence, i.e. that the problems of EBMgt can be summarized as insufficient knowledge and implementation. To assert that a combination of insufficient knowledge and implementation constitute the main problems in EBMgt would imply that major opportunities exist to manage and improve health services in basically uncontroversial ways. There are good reasons why many of the key actors in healthcare adhere to such a view toward the EBMgt problem. Not the least, it conceals the fact that EBMgt might involve taking positions on issues that involve complex value judgments and potential value conflicts. Asserting that EBMgt is an approach affected “only” by problems of insufficient knowledge and implementation suggests that it is something that is, in principle, manageable on the basis of objective and value-neutral “best evidence”.

We believe that if the aim of EBMgt is to improve healthcare services, then the current focus on these two problems is unfortunate. Despite the extensive discussion addressing EBMgt, there is far too little dialogue about what happens with the evidence used in implementing this type of management. In this chapter we highlight the need to shift the focus from the evidence and implementation problems mentioned above to

other challenges that arguably face every attempt to apply EBMgt.

It is important to emphasize that our stance to the problem is not to criticize of the principle value of EBM. Our aim is instead to develop an approach starting from the difficulties that arose from attempts in Sweden and other countries to implement EBM in practice. We believe that these difficulties are of a fundamental character.

To be used as a management tool, evidence must meet standards of consistency, general applicability, and stability. Evidence seldom, or never, meets these standards automatically. Hence, efforts are needed for evidence to live up to these standards, efforts that ironically cause the evidence to lose much of its capacity to serve as a basis for managing healthcare practice. The problems that arise when evidence has been formed so as to be disseminated in a standardized way to various local practitioners are rooted not in intractable practice but in unrealistic expectations.

On the following pages we will take a closer look at the idea of EBMgt. Then, based on empirical studies of EBMgt by ourselves and other researchers, we discuss several challenges that this idea encounters during implementation. In conclusion, we formulate several thoughts on how a more empirically based discussion on the role of evidence in managing health services could better contribute to a desirable development of the healthcare sector. A central conclusion for us is that attempts at EBMgt are unavoidably attempts to achieve agreement among different facts, as well as shifting and potentially conflicting values. Quite simply, it is impossible to create either value- and conflict-free evidence or the idealized contexts where such constructed evidence can rule. If health services are to meet future challenges, we need to exercise extreme caution when attempting to link EBMgt with other management systems. Consequently, we need a much more

initiated and reflexive discussion on the problems of EBMgt if it is to become an adequate management tool in healthcare.

An old idea in a new package

There are many indications of a growing interest in recent years for evidence based approaches. Since the 1990s, an increasing number of governmental and nongovernmental organizations at the national and international level have advocated evidence based medicine (EBM) as a solution to problems in managing healthcare. We also see a growing number of actors who have taken on, or have been assigned, the task of using evidence to influence the decisions made by healthcare professionals. The Cochran Collaboration, an international not-for-profit organization founded in 1993, is one of the most well-known champions of evidence based medicine. It produces and disseminates systematic reviews of healthcare interventions and promotes the search for evidence in the form of clinical trials and other studies of interventions.

The development in Sweden illustrates how interest in, and dissemination of, EBM has increased. Existing governmental agencies have been assigned to promote EBM. New national agencies, such as the Swedish Council on Technology Assessment in Health Care (SBU), have been created with assignments aimed directly at expanding EBM. There are numerous examples of how special interest groups (e.g. the Swedish Association of Local Authorities and Regions –SALAR), professional societies, (e.g. the Swedish Medical Association), and individual healthcare providers and counties have joined the trend by issuing “advisory” documents and other evidence-based guidelines.

Of course, the acknowledged importance of using evidence in the management of health services is not a new phenome-

non. Many countries, including Sweden, have statutes or regulations that require healthcare professionals to perform their activities in accordance with scientific evidence and accepted standards of practice. To help guarantee that people working in healthcare have the appropriate expertise, individual states have for many years, issued licenses to physicians and other groups of healthcare professionals.

Interest for EBM in recent years, however, takes its point of departure in a new idea concerning how evidence should shape health services. Rather than licensing healthcare professionals and turning over the responsibility for the content of care to them, the EBM concept emphasizes that the content of care can and should be managed from a distance. This is typically achieved through a process that involves a series of generic activities. As previously mentioned, the first step involves leaders calling for a systematic review of quality-appraised evidence on the best methods for providing care. The evidence is then disseminated to healthcare providers in the form of recommendations and guidelines. The healthcare providers are then supposed to adapt their methods to the evidence. The process as a whole is intended to achieve more efficient, equitable, high-quality, and (from different perspectives) valuable health services.

As with many trends in society, the growing interest for introducing EBMgt has a multifaceted history, which is too lengthy to cover in this chapter. However, one aspect is particularly important to highlight. Evidence based management (EBMgt) has its roots in evidence based medicine (EBM) – an intra-professional movement that began to emerge in the mid 1980s with the aim to improve the quality of medical practice. The strong administrative and political interest in using scientific evidence for guidance has, however, led to the linkage of certain fundamental ideas in this intraprofessional movement

to various administrative management tools, notably assessment and reimbursement.

This type of transference of ideas and tools from one context to another is common, but nevertheless important to recognize. It makes a difference who implements an idea and for what purpose. Promoting the idea of EBMgt as an intraprofessional quality movement is one thing. Arguing for the value of increasing the knowledge base in designing administrative reimbursement systems is another. Thus, for instance, it is not clear whether – or how – a scientific medical discussion on the validity of different studies for types of patients other than those who participated in the trial can be transferred from a professional medical context to an administrative context.

It is here that we can see the contours emerge for a central challenge regarding the introduction of EBMgt. Discussions and insights essential for managing with evidence can be silenced and scattered simply by moving tools for EBMgt between contexts, a point that we will revisit later.

Don't blame a lack of research or the healthcare professionals

In this section, we use our own and others' empirical research on EBMgt to discuss several practical challenges facing EBMgt. We suggest that these problems are rooted in an idealized and unrealistic perception of the nature of evidence. Specifically, we will question three interrelated assumptions that are usually implicit in discussions concerning the problem of finding the best evidence and getting practitioners to comply with it. The assumptions are that consistent, generalizable, and stable evidence exists, and it can form the foundation for unequivocal management.

We are by no means unique in questioning these assumptions on the nature of evidence. Many who work in the health-care sector – whether they do research, formulate guidelines, or work “on the floor” – are well aware that the assumptions are not particularly realistic. The assumptions have been criticized, both in scientific and theoretical analyses and in many empirical studies on producing and disseminating evidence. We will now exemplify what empirically-based criticism has targeted as regards the ideas of consistency, generalizability, and stability of evidence. In the following section we address the distinguishing features of empirically-based descriptions of the nature of evidence. We do this by reflecting on what happens with evidence when working to shape it into something consistent, generalizable, and stable that can be used in management.

Unrealistic demands on the nature of evidence

A central prerequisite for being able to use EBM to manage the content of health services involves collecting and compiling evidence on ill health, disease, prevention, and treatment. Much of the effort by different actors to promote EBM in healthcare has focused on this. The State has issued directives to agencies, healthcare providers have established local units and groups to compile evidence, pharmaceutical corporations have improved their ability to develop and disseminate both medical and economic evidence. Implicitly, all of these efforts build on the premise that it is possible to compile various types of evidence about a disease and its treatment into a larger, more comprehensive and equitable whole. In case after case, however, it has been shown that evidence is not automatically consistent and cumulative. In area after area the compiled evidence appears to be multifaceted.

On an abstract level, philosophies of science indicate that science does not possess – and probably will never possess – a method that can reflect reality as a whole. In recent decades many empirical researchers, in healthcare studies among others, have shown that in practice there are often several different bodies of evidence on the same phenomenon. These bodies of evidence do not necessarily “fit together”.

An example, which clearly illustrates that more evidence does not automatically lead to greater knowledge, can be found in specialized care for eating disorders. Sweden began to develop this type of care in the early 1990s. However, by the middle of the decade, major conflicts began to emerge among different providers concerning the causes behind eating disorders and how best to treat them. Two national research foundations arranged a scientific symposium aimed, in part, at bringing some order concerning the state of art. On the first day, the invited researchers were asked to inventory the research evidence on anorexia and bulimia. The introduction in the report produced from the symposium explained:

It was reported that we do not know most of the story. The etiology of eating disorders remains unclear. What is the importance of neurobiological conditions, starvation, eating habits, and environmental factors? Epidemiological facts are also missing: Is the disorder increasing or decreasing? Have there been changes in the disease imprint, and what are the social background factors?... [We] have poor knowledge about the somatic factors, both the initial risks and longitudinal risks of the disease.

Reading further in the report one finds that individual research groups were quite knowledgeable. The problem was that while one group knew that obsessive-compulsive personality disorder was the single most common cause of anorexia, another group knew that no psychopathology remained once

the weight had returned to normal. Due to the different findings on the origins of eating disorders, these conditions were treated in substantially different ways. For instance, different types of therapy were used to treat obsessive-compulsive personality disorders. These methods differed substantially from those using diet training to treat low weight.

The case of specialized care for eating disorders is one example illustrating that a multitude of evidence about diseases and their treatment can exist, but cannot be automatically consolidated. And eating disorders are no exception. Based on an extensive study of practices in diagnosing and treating arteriosclerosis, sociologist Annemari Mol argues that there are such great variations in the management of this disease by internal medicine specialists, surgeons, physiotherapists, general practitioners, pathologists, and others that it is not *one* but actually several different diseases that are diagnosed and treated based on different criteria and with different aims. Such diversity of knowledge is problematic when attempting to formulate EBM at a central level. Since different pools of evidence must be considered concurrently it is necessary to work toward developing an unequivocal base of evidence.

Another complication in developing an unequivocal evidence base involves the need to address the frequent changes in knowledge over time. This goes against a broader assumption about the nature of evidence, which relates to the above idea that knowledge is consistent and cumulative, i.e. that it is stable. Knowledge needs to be stable to meaningfully compile evidence within the framework of centralized attempts at EBMgt. Regulators are undoubtedly aware that the state of knowledge can change over time, and hence there is a need to update systematic reviews at regular intervals. Yet it is still taken for granted that the state of knowledge can be established and

that relevant evidence can be compiled at the particular point in time when guidelines are formulated or decisions made.

Many studies confirm that evidence changes with time – which can have a major impact on the possibility to work with EBMgt. One example illustrating how time affects evidence would be the principle problem facing the Dental and Pharmaceutical Benefits Agency (TLV) in Sweden. This governmental agency, founded in 2002, has the task of making evidence-based decisions concerning which drugs to subsidize through tax revenues. The agency's decisions should consider, e.g. the cost of drug utilization, which requires information about the price of products. However, a principle question is whether TLV should use the current price, or a possible future price. In some cases, the answer can have decisive importance. For example, prices tend to decrease dramatically for drugs that lose their patent protection. This substantially changes a drug's relative cost effectiveness, which is an important basis for deciding on subsidies.

The example of TLV and drug prices is but one example of how changes in evidence can fundamentally affect attempts at management. A slightly different way to express that evidence changes over time is that it is linked to a particular context in time. Evidence can also be linked to a particular setting. In other words, evidence is not automatically as generally applicable as it needs to be in order for it to be meaningful to present a review of the best evidence to diverse local practitioners who should then act on the evidence and reduce local variations. There are many examples of how evidence reflects the context in which it is produced and used.

For instance, a study of primary care physicians illustrates that the role in which physicians find themselves partly influences their perception of which evidence is relevant, and how the evidence should be interpreted. Physicians use evidence in different ways when they make decisions concerning the treat-

ment of individual patients and when they participate on local drug committees that make recommendations concerning utilization of drugs. Another example of how evidence is “perspective dependent” is the socioeconomic benefits that appear in economic analyses of treatments. When TLV evaluates the cost effectiveness of a drug, this analysis is not automatically in agreement with a particular organization’s revenues and costs for the drug’s use. In other words, there is no obvious and automatic match between a county’s increased drug costs and the corresponding (or greater) benefits to society in terms of higher quality of life for patients. In other words, the evidence on the cost effectiveness of drugs depends on a societal perspective of drug use.

In sum, what emerges in empirical research is a characterization of evidence that differs substantially from the implicit demands for consistency, generalizability, and stability presumed by the EBMgt concept. That evidence is multifaceted, locally based, and changeable is of importance for how evidence is used when attempting to implement EBMgt.

How are unrealistic demands on evidence addressed?

There are many examples of health services that encompass a multitude of evidence from the same, or different, time periods and contexts. The reason why this diversity of evidence in healthcare seldom receives attention is largely because day-to-day health services have ways to manage this diversity without reducing it. One of the most common ways by which this is done is by making patients move from provider to provider, rather than having different providers coordinate themselves around the patient at a single point in time. However, this method for handling a diversity of evidence does not work with

centralized EBM, in which different bodies of evidence is supposed to be considered at the same time. To do this requires a more consistent, generalizable, and stable evidence base. Such an evidence base can be developed, but it does not exist automatically. What more, the efforts to develop such an evidence base can fail, and even if one succeeds the evidence acquired is never a complete reflection of reality. The following examples illustrate different methods for achieving more consistent, generalizable, and stable evidence. Together, the examples suggest the relevance of characterizing the evidence used in EBMgt as a temporary “freeze” of stable evidence with a limited scope and a simplified content.

In empirical observations two general methods emerge for how to create the consistent evidence needed for EBMgt. One can either rule out certain evidence, or one can adjust different types of evidence in various ways. In both cases, the methods lead to a simplification of the evidence base. One way to rule out evidence is to create a specific framework for representing reality. This approach can be illustrated by an analysis of SBU's systematic reviews of scientific evidence on the treatment of hypertension and obesity. Through the use of an evidence grading system, the evidence that is relevant to consider is defined in advance. By such means, SBU creates a (more) unequivocal evidence base. Yet it involves limiting and ruling out evidence that could be of relevance for treating high blood pressure and obesity, respectively. Many healthcare practitioners have, for example, pointed to the lack of findings supported by adequate scientific quality as regards the effects of lifestyle changes on hypertension and obesity and the importance of the individual's motivation in the success of these interventions. Concurrently, the work of defining evidence is facilitated by the tradition in medical science to focus on development of experimentally based knowledge. As a result, findings from laboratory environments are favored at the expense

of findings that emerge in contexts that more closely approximate the conditions in routine health services where the findings are intended to be applied. This is particularly obvious in an area such as geriatrics where patients often have more than one disease. Hence, these patients differ from those patients with a single disease who regularly participate in various types of clinical trials that generate evidence on the effects of pharmacotherapy. Treating geriatric patients with multiple diseases in accordance with the best evidence found in a highly controlled experimental setting does not automatically constitute optimum therapy for the individual patient.

Another fundamental method for creating a homogenous evidence base is to adjust different findings to form a consistent whole. TLV (the state agency assigned to make evidence-based decisions on drugs that should be subsidized with tax revenues) must consider the medical and the economic evidence concerning the effects of drug use. A study of TLV's assessment of products to treat symptoms related to migraine and gastric acid disorders points to several methods by which to shape a consistent body of evidence. These methods enabled comparisons of the costs and effects of different drugs, which provided comparable data on costs, effects, and areas of utilization. The relevant, comparable characteristics were not obvious at the outset. On the contrary, there were usually several different sources of evidence on these characteristics.

For example, the various clinical trials included a wide range of clinical endpoints for migraine drugs. TLV handled this diversity by calibrating the different measures to the lowest common denominator: the "gold standard" advocated by the International Headache Society. In another case, TLV needed to take a position on different standards against which gastric acid drugs' treatment effects would be compared. By creating diagnosis-based groups, which enabled comparisons of all drugs used for treating five different diseases, a comparative

foundation was built for defining the similarities and dissimilarities of the drugs. In another case, involving several conflicting definitions of what constitutes “drug utilization” (dosing, etc), TLV solved the problem of conflicting findings by prioritizing the definition in product abstracts over other sources. TLV’s various approaches to harmonize findings help to form a coherent evidence base with which to motivate agency decisions on drug subsidies. As in the examples presented above, the consequence is that the consistent evidence produced comprises a simplified evidence base. For instance, TLV’s solution to the question of what constituted drug utilization meant that the agency’s assessment did not include any utilization outside of the approved indications (so-called off-label prescription). Very specific evidence on the effects of individual migraine drugs also disappeared in TLV’s assessment since its inclusion would not have permitted a comparison of the different drugs.

The examples above illustrate different ways to achieve a more consistent evidence base, by reducing the diversity of evidence. Dealing with the changes in evidence requires other methods. In the case mentioned above concerning TLV and changing drug prices, the agency decided in principle to use current prices when assessing the cost effectiveness of drugs. Thereby, the agency managed the problem of changes in evidence by delegating future uncertainty in price trends to possible future evaluations of the products’ subsidy status. Deferring changes by delegation in time is a common way to achieve a temporarily stabilized evidence base at a given point in time. However, the consequence is that management based on such evidence has an underlying temporary instability.

Creating stability at a particular point in time by delegating uncertainty in time is one way to manage changes in evidence. In some ways it is similar to attempts to acquire more generalizable evidence by distancing oneself from the local context in

which EBMgt will be used. SBU's use of a general system for grading evidence, which is intended to cover all therapeutic fields, is an example.

An alternative to dealing with "local knowledge" is to reduce the distance between the scientific evidence and reality by trying to make the local context more "evidence friendly". For instance, health services can be encouraged to make their patients more similar to the trial subjects on which the scientific evidence base is built, e.g. by changing the diagnostic criteria used. This appears in SBU's guidelines for obesity and hypertension and in a study to develop evidence-based recommendations for alcohol consumption.

In summary, a range of different methods emerges by which it is possible to try to acquire consistent, generalizable, and stable evidence. We have illustrated how evidence can be simplified and adjusted to become more consistent. We have also shown how changing evidence can be made more stable by delegating this uncertainty in time. Finally, we have given examples where evidence can be made more generalizable by distancing it from the reality that should be managed. It is also possible to manage "local evidence" by attempting to reduce the distance to the practice being managed through adapting reality to the evidence.

In all cases, we believe that the efforts to achieve consistent, generalizable, and stable evidence that can be used to manage healthcare practices, also serves to shape and change the evidence. This, we believe, must play a greater role in the debate on the use of EBMgt.

What the discussions on evidence based management should address

We have highlighted several challenges facing the implementation of EBMgt, which are the result of evidence often being highly diverse, locally anchored, and subject to substantial change. To be useful as a management tool, evidence must become more consistent, generalizable, and stable. In shifting the focus to look at how such evidence is produced, we presented examples of the consequences that efforts to generate such evidence can have. Our overarching conclusion is that the evidence used in EBMgt often represents “frozen”, temporarily stabilized, simplified findings of limited scope. This makes it possible to implement EBMgt, but at the expense of ignoring large and potentially relevant parts of the reality to be managed. We are convinced that the challenges presented by the character of the evidence cannot be solved easily or uniformly. If we want to improve health services, then greater focus must be placed on issues that have to date been largely ignored.

In contrast to the current debate on the challenges of EBMgt, our approach highlights problems other than the lack of evidence and difficulties in implementation. Empirical studies of EBMgt suggest that, in practice, more evidence does not automatically make it easier to apply EBMgt. At times the opposite occurs: more evidence leads to it being less consistent, thus creating the need to ignore much of it. As efforts to make evidence-based decisions or formulate evidence-based rules and guidelines are based on a simplified, temporarily stabilized evidence base, it is both necessary and desirable to interpret the resulting management attempts for them to be relevant and create value in a specific context. Thus, the unwillingness of local practitioners to allow themselves to be directed by the evidence cannot be uniformly viewed as a

source of lower quality and less efficiency. On the contrary, in some instances it can be a critical means of value creation.

Our contention is that the healthcare debate should address other questions if there is a real ambition to achieve good healthcare in a broad sense. In particular we would like to highlight two issues:

The first issue concerns how we can design suitable reimbursement models, assessment methods, and other management systems that in practice allow for systematic and systemic skepticism of the wisdom of EBMgt's content. Strict application of EBMgt, e.g. where reimbursement is tied to compliance with guidelines, could actually jeopardize quality and efficiency. Rather than focusing on how to bring practice into compliance with EBMgt, the aim should be to enable different parties to support local applications that create value. Particularly prominent is the question concerning how the "central level" can and should influence practice. This does not solely involve making decision-makers and regulators more knowledgeable by equipping them with more of the best evidence. It also involves equipping practitioners to be wise and occasionally question the appropriateness of the evidence-based management instruments.

The second issue concerns how to enable a discussion of addressing matters that are complex from a value standpoint, and potentially filled with conflicts regarding the direction and content of healthcare. As mentioned above, there are good reasons for many of the central actors in healthcare to adhere to the prevalent view of EBMgt's problems. Presenting EBMgt as a solution affected "only" by insufficient evidence and implementation problems implies that "in principle" it is possible to manage on the basis of an objective and value-neutral "best evidence". The prioritization imperative in healthcare is a widely discussed topic. We believe that it is impossible to solve this overarching problem effectively or legitimately by

maintaining the battle lines that have been drawn according to an idealized and unrealistic view on the nature of evidence.

If EBMgt is to live up to its promise, we must actively take these real challenges more seriously. In other words, we must be skeptical of EBMgt's potential since it would be unwise to do otherwise.

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“*Few markets function as the market debate usually suggests. A constructive discussion of healthcare markets should instead use the diversity and plasticity of markets as the points of departure. If it is possible to influence the characteristics of markets it becomes meaningful to continually and systematically ask what markets we want and how we can create them.***”**



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What care do healthcare markets need?

Markets are not a given

Whether or not markets should exist for health services is a hotly debated topic. Advocates of market solutions claim that markets lead to greater choice, accessibility, and entrepreneurship, while concurrently guaranteeing more efficient resource utilization. Opponents claim that the core values such as an equitable distribution of society's limited resources are lost in markets. Another concern is that attempts to create markets lead to "artificial" markets and an inefficient administrative apparatus. The criticism may even be wrapped in expressions such as "Monopoly money" to emphasize that an economic plan is not a *real* market, but an attempt to "play marketplace".

An important point of departure for both sides in this type of polarizing debate is that markets have certain features. Markets are assumed to produce certain effects: freedom of choice if one believes in market solutions, or inequities if one does not believe in market solutions. From the idea that markets have certain specific inherent features it follows that the concrete markets surrounding us, e.g. for prescription drugs, primary care, or hip replacement surgery, can be either real or imagined, natural or unnatural. Economists readily discuss market failure when it comes to characteristics observed in actual markets that do not really follow the theoretical model.

Here, both camps seem to agree even though they do not see eye-to-eye for the most part.

We believe, however, that the departure points mentioned above are inappropriate when we discuss the organization of health services. Our research on market processes, and the research of others, suggests that such points are misleading. They hide the important questions about how markets are organized and the effects of organization. The distinction between real and imagined markets, and between the natural and unnatural markets, are neither practically or analytically useful in constructively discussing markets, their organization, and their effects. Likewise, studies of concrete markets offer no support to the idea that a market has certain given features that always have certain effects when it is introduced in one area or another. Rather, studies show that markets take many different forms, and a range of different actors contribute actively to their design – buyers, sellers, interest organizations, consultants, agencies, professional associations, etc. In some instances, their contributions to shape markets are not particularly well thought through. Rather, they could be considered as unpredicted consequences of an actor's actions. In other instances, the contributions are made with very specific intent, e.g. explicit attempts to change how a market is organized.

Although we may not accept some of the secure foundations for debating the presence of markets in healthcare, our aim is not to stifle the discussion. Quite the contrary. *A continuing discussion that engages a broad spectrum of interests is essential. It could even be viewed as part of the effort to improve the organization of health services and the roles of different markets in this sector.*

This chapter aims to highlight several areas where a substantially more public debate is needed. Greater attention needs to be directed at questions concerning how markets are organized and the effects they have. The same applies to questions concerning how different actors can be best equipped to act in

a particular market. This becomes especially important if we discuss situations where patients serve as a type of market actor, e.g. by choosing a primary care center, or by selecting and purchasing drugs. To place these questions in context, we begin by presenting a perspective and several concepts that we believe can be helpful in discussions such as this.

A practical perspective on markets

Although market solutions in healthcare might be a much-debated phenomenon, a large and multifaceted number of markets for health services already exist. Several more-or-less autonomous actors deal in everything from drugs and medical technology to healthcare interventions and labor. The markets constituted by these exchanges vary in their organization – over time and place, and depending on what is traded – for instance in regard to which actors serve as buyers and sellers, and what other actors contribute in shaping the market. This wealth of variation in organization makes it difficult to talk about *the market* for drugs, or *the market* for health services, etc, on anything more than a general level. To seriously engage ourselves in healthcare markets and their quality we must pay due attention to the characteristics of the individual markets.

Markets as ongoing practice

One way to discuss markets while remaining sensitive to their differences and varying effects would be to start from the concrete activities that contribute toward shaping and maintaining a market. Using such a perspective, markets can be viewed as continuous results of ongoing practices. The concept of *market practices* refers to all of the concrete and repeated activ-

ities that create and form a market. These activities can be grouped into three types of market practice: *Exchange practices* refers to the concrete activities required to consummate an individual economic exchange between a buyer and a seller. *Representational practices* includes activities that contribute to depict markets and/or how they work, e.g. attempts to collect and compile information about the market. *Normalizing practices* accounts for activities that contribute to establish guidelines for how a particular market should work, or be (re)shaped according to some (group of) actor(s), e.g. stipulations regarding who can act as buyers or sellers. By starting from the concrete activities, the market becomes a result of constantly ongoing organizing rather than something that has an existence independent to the market practices. This also means that a particular market's characteristics and effects are not viewed as given, but as being continually shaped by ongoing market practices. This perspective is precisely why we in the introduction rejected the tendency to categorically attribute unequivocal features to markets. What is important, we believe, is *how* markets are being organized.

By paying attention to the concrete and repeated activities constituting markets it becomes clear that the organization of markets engages many more actors than those who serve as buyers and sellers. Principle decisions concerning which actors may serve as sellers and buyers in a market, and following up these decisions, are examples of activities that are often performed by people other than potential sellers or buyers. Creating and maintaining product classifications are other examples of activities that can be performed by others than sellers and buyers, and which contribute toward forming markets. For instance, through decisions on generic substitution, Sweden's Medical Product Agency determines which drugs compete in the same markets in Sweden. State agencies can

also directly monitor what the sellers offer or the conditions under which goods and services are traded.

Hence, there are several roles other than seller or buyer that actors can play in a marketplace. Many different types of organizations can also take on these roles. State agencies often play a central role, but even other types of organizations can, in different ways, be involved in concrete activities in markets. When they are, they also contribute toward forming the market itself. Simply stated, we see three main ways how these actors can contribute toward forming the market: by forming *what is exchanged*; by forming *how it is exchanged*; and by influencing the *exchanging partners* (seller and buyer). Together, these considerations create *pinch-points* that become subject to market trading in an economic system. Can interactions between a department of orthopedics and other parts of the healthcare system be organized as market exchanges? What should be considered as part of the infrastructure in the healthcare system, and hence not exposed to competition? What expertise is required, e.g. to buy and sell anesthesia services?

The latter leads us to a central theme that seldom receives sufficient attention. If we view agencies as something that can be and are subject to shaping, it raises the question about what exactly shapes specific market actors. What interests and capabilities have they been equipped with? The question is important since it applies generally and can be directed at a large county council, a drug company, or even toward patients who purchase drugs. In one way or another, all are equipped to be able to act in the markets in which they participate. A highly relevant question then becomes: What does this toolbox consist of, and is it adequate from the standpoint of different viewpoints and interests? This becomes particularly interesting in situations where markets are reorganized since it tends to influence the demands placed on the actors. Here there is a

need to discuss which types of agencies should be deemed desirable and, ultimately, which types of markets should be deemed desirable.

At first glance, talking about tools for market actors might seem unusual. But at closer examination, we see obvious examples all around us, e.g.: product tests in a magazine that can help consumers select a TV; analytical models that corporations use to set prices; the procedures and principles that a purchasing unit follows to stay within the framework of the Public Procurement Act. Rather, it would be more difficult to think about a market actor without some type of toolbox.

If we accept the idea that tools can shape an actor's capability to be a market actor then it follows to begin thinking about where the different tools come from. Studies show how tools based on specific theories of markets have influenced actors' capabilities in a way that caused the market to increasingly follow the underlying theory. The growing market for options in Chicago during the 1970s is such an example, largely formed by the option pricing theories of Black, Scholes, and Merton. An obvious effect on the options market was that traders gradually came to use their formula, which led to the market gradually behaving more like the theory that was said to reflect the market. Through their actions in the marketplace, traders gradually behaved more like the economically rational actors proposed in the theory. This underlines the need for well-informed discussions about which theories and theoretically based tools should be used in designing a reform. It underlines the need to reflect on, and discuss, how actors are equipped, how markets are formed, and what the outcome can be. If markets can be shaped, this raises questions about what is important.

What can markets achieve, and how?

What can actions in a marketplace achieve beyond trading goods and/or services? It is not necessary to make an extensive inventory of different theories and discussions on markets to obtain a short list of positive core values associated with what markets can achieve, e.g.: efficient distribution of resources, cost pressure, new enterprise, freedom of choice, diversity, accessibility, competition, development, efficient production, and equity. Likewise, it is not difficult to find negative values associated with what markets can achieve, e.g.: inequitable distribution of resources, exploitation of inaccurately priced common resources, and exclusion of weak actors.

If we consider the lists of positive and negative values it is easy to see that in an individual market it can be difficult to maximize all positive values while concurrently minimizing the negative ones. In fact, many of the values mentioned above are in conflict with each other, as clearly shown by many theories and examples. To use *one* example from *one* theory, over 60 years ago Joseph Schumpeter pointed to the conflict between the capacity of markets to be efficient at the moment and their ability to foster development. One of the most relevant examples from the healthcare sector concerns how agencies balance criteria for cost effectiveness against principles of solidarity and equity when making decisions to fund various activities. Here it is easy to see the potential conflicts between different values.

The problem is that individual markets cannot achieve all of the positive and none of the negative. Further, markets distinguish themselves by producing different amounts of different values. Hence, the markets for drugs, eldercare, and primary care distinguish themselves not only in terms of what is traded and who is involved in these trades. They also distinguish themselves in terms of positive and negative values, and how

much of these they produce. We can say that markets balance different values.

How this balance is achieved varies among markets. For instance, when items are subject to competition the quality offered can differ dramatically among different markets. In some markets, price competition is a central feature; in others, prices are determined by some other party (the government, a manufacturer in an earlier phase, etc), while the sellers compete mainly with the help of service offers. What constitutes the correct distribution of responsibility in a market is far from obvious. It depends on the values to be balanced and which balance is considered to be desirable.

Several important consequences occur as markets balance different values. First, in a broad sense there is a political side to what markets achieve, to the extent that markets encompass conflicts between different values, and thereby in practice achieve a balance among values. A key question here is whether the balance achieved is desirable, and obviously several standpoints are possible. In other words, there is always room for politics in a market. Another consequence concerns the importance of descriptions of what values a specific market achieves. This concerns descriptions such as those generated through traditional surveillance of competition, but also other types of descriptions regarding the effects that the current market produces, e.g.: What degree of price pressure exists in the market? What form of development is achieved? Which actors are excluded? Creating understanding for how different values are balanced in a particular market requires a wealth of descriptions. Without this, there is a risk that the production of certain values will be negatively affected while, at the same time, discussions about what is desirable in a particular balance of values will be skewed.

Two areas that need more care and attention

We assert that markets can be formed, and that they can be shaped by the tools that market actors are equipped with. We also assert that markets balance different values; that it is essential to have a picture of how different values are balanced, and that markets have, in a broad sense, a political side. Based on those assertions, any categorical support for, or opposition to, markets seems to be a much too sweeping attitude formed on the basis of gross simplifications. Rather, the debate should address the values that a market creates; whether the current balance between these values is desirable, whether the actor's conditions for acting can be strengthened, etc. Two concrete areas for constructive discussions concern the actors and their abilities and the particular problems that a market presents.

Actors and their capabilities

The interests and capabilities of actors are influenced by how they are equipped. Hence, the tools available to market actors become highly relevant when the state actively seeks to influence or create markets. If a reform presumes that individual consumers act according to a preconceived rationale, the probability increases that the goals of the reform will be achieved if the consumers are given tools that support such actions. It has been claimed that the deregulation of markets has not achieved the expected results because consumers have not been active enough in changing vendors, thereby generating sufficient price competition. Such observations suggest that we should not assume that different actors automatically adopt a particular type of agency. Rather, discussions need to address which type of agency should be viewed as desirable, and how a particular agency can be formed with the help of

various tools, e.g. support for information collection, processing, and incentive structures.

Public procurement is an area where there has been some discussion concerning how market agencies are formed. Here it deals with the rules that public actors should follow and the tools that they should use when procuring goods and services. One concern expressed is that the rules can, in effect, inhibit developmental collaboration between buyers and sellers. Another is that the rules inhibit environmental efforts by local authorities since it is not permitted to consider distance in the procurement process. In healthcare, various types of “free choice” systems have occasionally been presented as alternatives to legislation on public procurement. In terms of principles, such discussions deal with the possibilities and limitations to differently shape desirable market agencies.

Drugs are another area in healthcare where important discussions address what various actors can do. Looking back a decade or more, the roles of patients and physicians alike have changed concurrently with the appearance of new actors. It has been more common for central state agencies to make decisions about drug subsidies on the basis of health economic analyses. Regional or profession-related drug committees have become increasingly important as regards physicians’ prescription patterns. In the United States, insurance companies have played corresponding roles. Markets for drugs now engage many more actors than previously, and there are many who want to form both the physicians’ and patients’ agencies. A small example illustrating the latter would be the information that drug committees give to both patients and physicians. Again, it is about rules and tools that shape agencies, and the interest in moving them in directions deemed desirable.

There are obvious examples of attempts to form agencies in healthcare, and occasionally they are discussed in such terms. We believe, however, that these discussions are neither suffi-

ciently comprehensive nor systematic. Explicit questions are seldom asked concerning what type of agency should be deemed desirable and what the different types of agencies mean for the values produced by the market in question. This theme requires much more care and attention. It particularly involves areas where individuals are intended to assume a purchasing or voting role and thereby act in some form of market agency capacity.

Images of markets and their problems

Another area where markets need much more care and attention deals with how we understand the markets and their problems. In other words, this deals with how we can continuously create and improve our knowledge concerning what markets achieve. This includes knowledge about the effects that we generally associate with markets, e.g. questions concerning competition and pricing. Another important area involves efforts to identify and create knowledge about externalities in market trading, i.e. positive or negative values that are not directly reflected in the trading of goods or services (adverse effects, environmental effects, etc). Externalities appear continually in markets, even though the specific forms they take are often unforeseeable – it is not possible to take everything into consideration. Previously we mentioned that markets balance values, and every individual market needs many different descriptions to depict these balances. The presence of externalities is yet another strong motive for needing a wealth of description since this can enable us to pay better attention to unforeseen externalities. Again, the existence of many different market descriptions is a condition for in-depth and qualified discussions concerning what is desirable in a particular balance of values.

An illustrative and current example of the externality theme are the discussions in Sweden on a possible association between introducing free choice of primary care providers for patients in Halland County and the increased use of antibiotics in the county. It was suggested that physicians who were in this more market-like situation were more likely to prescribe antibiotics since otherwise they were at risk of losing their patients to other caregivers. If such an association can be established (which remains uncertain), and the degree to which antibiotic prescriptions are found to be medically unmotivated, it should be viewed as a negative externality of the market-like organization.

A functioning market requires the existence of ways to identify and deal with externalities. This highlights why it is important to have many qualitatively different descriptions of a market. Externalities are not visible on their own. Identifying them requires the development of activities that describe and create knowledge about the market and its problems. Specifically and thoroughly measuring a particular identified effect can also require extensive investments in some form of measurement system. Without such activities and investments the opportunities for a market to “cleanse itself” are small. Because externalities can appear in the most unexpected places, both detailed and broad supervision of healthcare markets is necessary. Further, multidisciplinary supervision is an important prerequisite: it is not enough for descriptions to be based on a single set of ideas about what a market is and how it functions.

As a rule, markets must manage conflict between opposing values. Nevertheless, discussions concerning how we can describe markets in such terms are remarkably weak and unsystematic. Where is the debate on how to best balance different values in a market, and what constitutes broad supervision in different markets? These questions, we believe, require more care and attention.

Healthcare markets are worth caring for

The aim of this chapter has been to identify several areas where the public debate on healthcare needs to be strengthened. We have attempted to show how the quality of debate can be improved if we take off some of the blinders around what a “real market” is. Very few markets function like the ideal market that the polarising debate appears to center on. Instead, the markets surrounding us reveal a great “diversity of species”, even the healthcare markets.

We have advocated being open to the idea that characteristics of market actors are influenced by how they are equipped, and that the effects of markets are neither easy to identify nor are they predetermined. In being open to the possibilities to actively influence market characteristics it becomes meaningful to systematically ask questions about what markets we want and how we can create them. If we know that our health and social services are important to healthcare markets, then they are also worth caring for. Such a foundation for debates on healthcare markets creates the prerequisites for constructive discourse and, in the long run, for better markets.

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“ *We need wit and courage to make our way while our way is making us. But that is our dignity as human beings, and we rob ourselves if we pardon us by the absolution of historical necessity.* ”

Alexander Herzen to Karl Marx in Tom Stoppard's
The Coast of Utopia, Part III (Salvage)



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Debate on future healthcare must go beyond easy solutions and answers

Healthcare is an important and vital part of society. Likewise, coverage and scope of health services are important in the lives of citizens. But there are no given truths to show us how to design healthcare and its component parts. Since the advancement of healthcare is not predetermined, we can all participate in shaping it. We need both courage and wit as we seriously discuss our interests and values if we are to bridge the deep conflicts that divide these different interests and values. The search for new ways to organize, lead, and manage health services must take many directions, and many voices must join in the discussion. Discourse is an important part of the development process, and to abdicate from the idea that discourse is important would be to abandon our humanity.

When the only solution marches in,
development and discourse wander out

In the introductory chapter we critically addressed polarizing debates. We argued that they often serve to give participants distinct political identities rather than nurturing a fruitful progress. We also argued that a debate surrounding a popular and simple dividing line could serve as a shield against con-

fronting more difficult and important issues. It should have been clear that the debate itself is not what we object to. Debate is necessary. It is needed, not least because of the many core values that are in conflict with each other in the health-care arena.

What we object to are the deadlocked discussions that not only overshadow the scope of negotiation, but also silence the necessary discussions on core values. A deadlocked, polarizing debate can, for instance, deal with arguments for or against a particular tool. Debate on the extent to which health services must be delivered in a particular way does not really represent progress unless it is linked to discourse about the value we hope to achieve and how we can balance the necessarily many and conflicting values. If a discussion on organization does not relate to these important issues it will not contribute to progress.

Nevertheless, all too often we find ourselves in debates that focus solely on different tools (means). Examining different tools by turning them inside out simply becomes a discussion in itself, and goals fall by the wayside. We get trapped in a type of tyranny of tools that treads over the important question of which values are central to the organization's justification. The fact that the means can overshadow the more important issues is not unique to healthcare. Although, perhaps it is somewhat more unfortunate in healthcare since a prominent feature of health services is that many different core values are in play and must often be balanced against each other.

This book represents an attempt on our part to influence the course of development in healthcare. Using existing research as a base we intend to shift the debate. The different chapters present the authors' various projects, but do not form a single sharp voice. Nor was that our purpose. Hence, we cannot summarize this book into a coherent checklist of solutions. Rather we present several concluding thoughts on how it

might be possible to continue advancing the debate and other forms of interaction as a means to develop healthcare.

Debate can create value

The problem with encounters that take place within the framework of a polarizing debate is that they shape the discussion into a game between fixed positions. Encounters like this do not offer particularly good conditions for learning, creating value, and advancing. Naturally, such debates are justified in some situations, but applying this logic to all discourse of this type is not productive. Different discussions must have different purposes.

Discourse about tools and approaches can be won – providing that we agree on the values, and the discussion only centers on convincing everyone about which tool is the right one. Such a focus of a discussion turns the thinking toward the rational decision model. The model assumes that one chooses the best tool to achieve a given goal. In practice, the conditions for decision-making of this type are not met. We do not always know what the goal is, and we do not always agree on how different values should be balanced. Such a situation requires a debate about values – a debate that cannot be won, but can nevertheless promote development and learning.

It is remarkable that the predominant debates today tend to rest on the premise that we agree on the values, but disagree on the tools. Our view is that such debates do a major disservice to healthcare.

One of the participants in our program on creating value in healthcare expressed it like this: “*A prerequisite for creating value in healthcare is that we succeed in acting with an open mind, without prejudice, and that all actors are important in creating the outcome.*”

We must be able to, and dare to, let go of our own agendas and listen in order to understand how different actors think and act.”

Too much action, too little talk

Solutions and tools are plentiful. Different tools often deal with one problem at a time, and the tool *per se* provides a partial solution. Every organization encompasses many different activities, each of which has its rationale, e.g. economic control, quality registers, practice guidelines, and various point systems. We conduct too few discussions regarding how these different systems work with and against each other, and what opportunities they offer for creating value and organizational improvement. Or, of at least equal importance, what opportunities they hinder from creating value and organizational improvement.

If polarizing debates take over the discussion, then it is as if tools take over the workshop. That is not good. We believe that we need a greater capacity for reflective discourse. This requires more arenas for cross-border discussion. Crossing borders provides a wider area for innovation within and among organizations. The leadership that many seek in the healthcare sector would also be promoted if we did not allow the tools to completely dominate the workshop, and if we did not allow polarizing debates to dominate all forms of discourse. Reflective discourse about problems, opportunities, and challenges also provides the necessary confidence to those who actually work in the workshop.

An important role for research involves formulating the important questions regarding essential problems and proposing how we can view problems in new ways. Based on our different points of departure, we have attempted to present such questions and perspectives to support reflective discourse on

the development of health services. For the next step, we would like to invite reactions and other arguments into the discussion. This also reflects the idea behind the *Leading Health Care Foundation*, an academic think-tank. Our book is only the end of the beginning in creating such an arena.

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