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**CARE DELIVERY VALUE CHAINS FOR
OPHTHALMIC CLINICS IN
SWITZERLAND**

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Care Delivery Value Chains for
Ophthalmic Clinics in Switzerland

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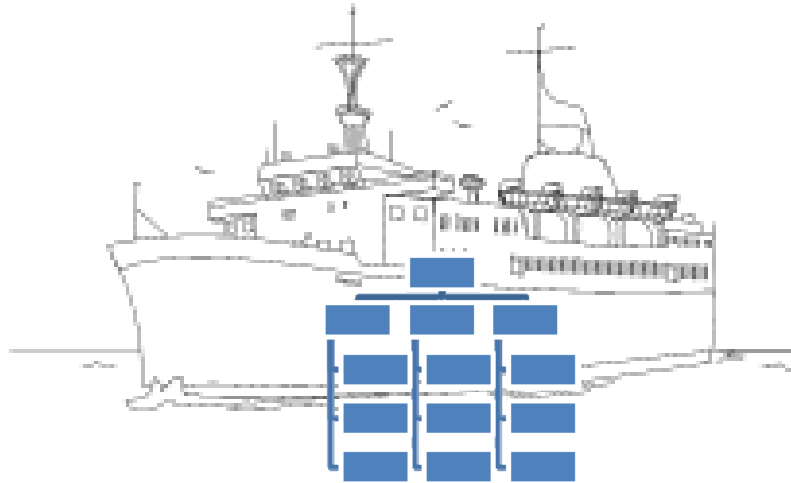
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MASTER PROJECT

MASTER OF ADVANCED STUDIES IN
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Twelve years ago, Nestlé was organized like a heavy oil-tanker...
Today, we are a fleet of speedboats!

Peter Brabeck, CEO and President,
 announcing record earnings at Nestlé's
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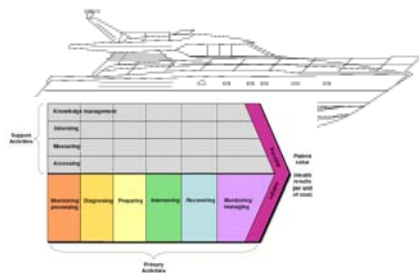
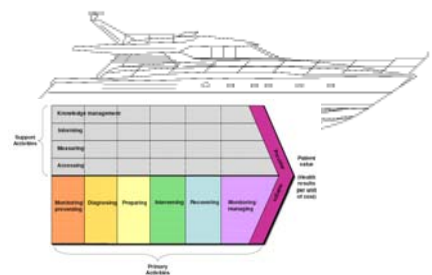
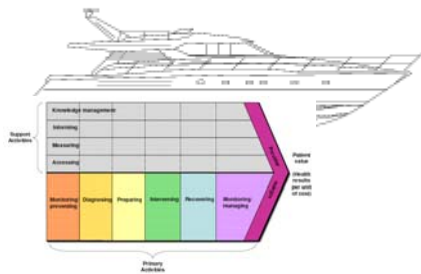


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EXECUTIVE SUMMARY

PERCEIVED PATIENT VALUE is often not aligned with the emerging expenses for health care services. In other words, the costs are often supposed as rising faster than the actual value for the patients. This fact is causing major concerns to governments, health plans, and individuals. Attempts to solve the problem have habitually been on the operational effectiveness side: increasing patient volume, minimizing costs, rationing, or closing hospitals, usually resulting in a zero-sum game. Only few approaches come from the strategic positioning side and “competition” among hospitals is still perceived rather as a danger than as a chance to create a positive-sum game and stimulate patient value.

In their 2006 book, *Redefining Health Care*¹, the renowned Harvard strategy professor Michael E. Porter and hospital management expert Professor Elizabeth Olmsted Teisberg approach the challenge from the positive-sum perspective: they propose to form Integrated Practice Units (IPUs) and manage hospitals in a modern, patient value oriented way. They argue that creating value-based competition on results should have the same effect on the health care sector like transparency and competition turned other industries with out-dated management models (like recently the inert telecommunication industry) into highly competitive and customer value creating businesses.

The objective of this paper is to elaborate Care Delivery Value Chains for Integrated Practice Units in ophthalmic clinics and gather a first feedback from Swiss hospital managers, ophthalmologists, and patients, if such an approach could be a realistic way to improve health care management. First, Porter’s definition of competitiveness (distinction between operational effectiveness and strategic positioning) is explained. Then, the Care Delivery Value Chain is introduced as a key element for understanding value-based management, followed by three practice examples for ophthalmic clinics. Finally, recommendations are given how the Care Delivery Value Chain can be managed efficiently and how the obstacles of becoming a patient-oriented organization can be overcome. The conclusion is that increased transparency and value-based competition on results has the potential to change the mindset of hospital managers—which will align patient value with the emerging health care expenses. Early adapters of this management approach will gain a competitive advantage.

Keywords

Hospital organization; ophthalmic clinic; strategic positioning; value-based competition.

¹ (Porter und Olmsted Teisberg, *Redefining Health Care*)

1. INTRODUCTION

In their 2006 book, *Redefining Health Care*², Professor Michael Porter and Professor Elizabeth Olmsted Teisberg propose that creating “value-based competition on results” would be a solution to problems in today’s health care management. They observe that many hospitals are still managed in functional organization structures—resource-based, like industry was managed 20-30 years ago. They suggest that, in order to create better patient value, hospitals should create Integrated Practice Units (IPUs). An IPU would represent a specialized unit within a hospital. The IPU is given the responsibility over the full cycle of care of a certain disease or group of diseases.

Like a “business unit” in modern industry, the IPU would manage the key activities over the full cycle of care. In health care, the Value Chain starts with “Monitoring and Preventing”, and goes over “Diagnosing” to “Preparing” and “Intervening” and “Recovering and Rehabilitating” and again to “Monitoring and Managing” of a certain disease. Using the concept of the Care Delivery Value Chain, the objectives of such entities in a hospital would be “*redefined*”. This means that special emphasis would be made on the “Support Activities”, which are “Knowledge Management”, “Informing”, “Measuring”, and “Accessing” this specific health care services.

A special focus would be on “Feedback Loops” to increase the quality of communication within the organization, with patients, and with third parties. Finally, a hospital organized in such Integrated Practice Units is more flexible to perform strategic positioning. It should offer an inspiring environment and would be more flexible to align with patient value. The processes of continuous learning, improving overall quality would be encouraged. After all, optimized Care Delivery Value Chains should reduce total costs per patient.

In an e-mail with the author³, Professor Porter’s assistant Jennifer F. Baron put emphasis on the issues that the Value Chain aims to maximize value, defined as health outcomes per unit of cost. In Professor Porter and Teisberg’s view, processes of care, while important, are not a direct proxy for health outcomes. Improved processes can lead to better health outcomes and therefore drive value, but to truly understand value of care one would have to measure health outcomes directly (e.g., improvement in vision, complications from cataract surgery, time to recovery, etc.), not just processes (e.g., did a patient receive a particular medication following surgery).

1.1 PROBLEM IDENTIFICATION

Traditional organization charts are functional and show a resources-based picture of a company or a hospital. There is a risk that managers focus their controlling instruments too much on measuring internal performance and forget about the real purpose of their organization. If a hospital’s cost accounting system measures the performance of health care professionals mainly according to their function within such a diagram, their willingness to see the “big picture” decreases and they tend to focus their efforts just on the issues where they get measured. Much patient value can get lost due to structural inefficiencies and the attitude of health care professionals to shift the responsibility on

² (Porter und Olmsted Teisberg, *Redefining Health Care*)

³ E-Mail with Jennifer F. Baron, assistant to Professor Michael E. at Harvard Business School, Boston, MA, July 10, 2007

to other departments. In order to be conforming to the hospital’s performance measurement system, the manager of the surgery department will minimize his own costs and maximize his profit for example by sending patients to go home earlier, sometimes too early. If patients get complications within a few days, they will come to the emergency department and count as “new” patients and new benefit there. There is little incentive to make the best decisions to obtain patient value within a functional system based on internal resources; it can even be contra productive. Hospital Director Remy Rouge stated in an interview⁴ with the author that the introduction of the 1990ies cost accounting systems reduced willingness of health care professionals to act over their own field of responsibility—and synergies got lost.

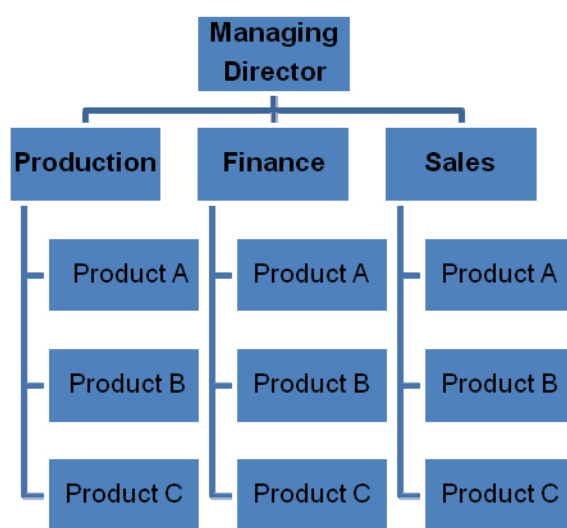


Figure 1: Resource-based functional organization chart (simplified example)

1.1.1 What is Patient Value?

Over 40 years ago, Peter Drucker observed that a company’s first task is “to create customers”.⁵ This mindset can be compared with the hospital director who thinks that his hospital’s first task is “to create patients”. However, customers face a vast array of product and brand choices, prices, and suppliers. This is also becoming an issue in the health care sector, where quality indicators become more transparent. How do customers and/or patients make their choices?

Philip Kotler believes that customers estimate which offer will deliver the most value. Customers are value-maximizers, within the bounds of search costs and limited knowledge, mobility, and income. They form an expectation of value and act on it. Whether or not the offer lives up to the value expectation affects both satisfaction and repurchase probability.⁶

⁴ Interview with Remy Rouge, Hospital Director Regionalspital Bern-Belp, February 20, 2008

⁵ Peter Drucker (1909-2005) quotation: “The purpose of business is to create and keep a customer.”

⁶ (Kotler 60)

Kotler defines “Total customer value” as the perceived monetary value of the bundle of economic, functional, and psychological benefits customers expect from a given market offering. Derived from this definition one could argue that the “Total patient value” as the perceived monetary value of the bundle of economic, functional, and psychological benefits patients expect from a health care provider.

“Total customer cost” would be the bundle of costs consumer expect to incur evaluating, obtaining, using and disposing of the given market offering. Again, “Total patient cost” would be the bundle of costs patients expect to incur evaluating, obtaining, using and disposing of the given health care service.

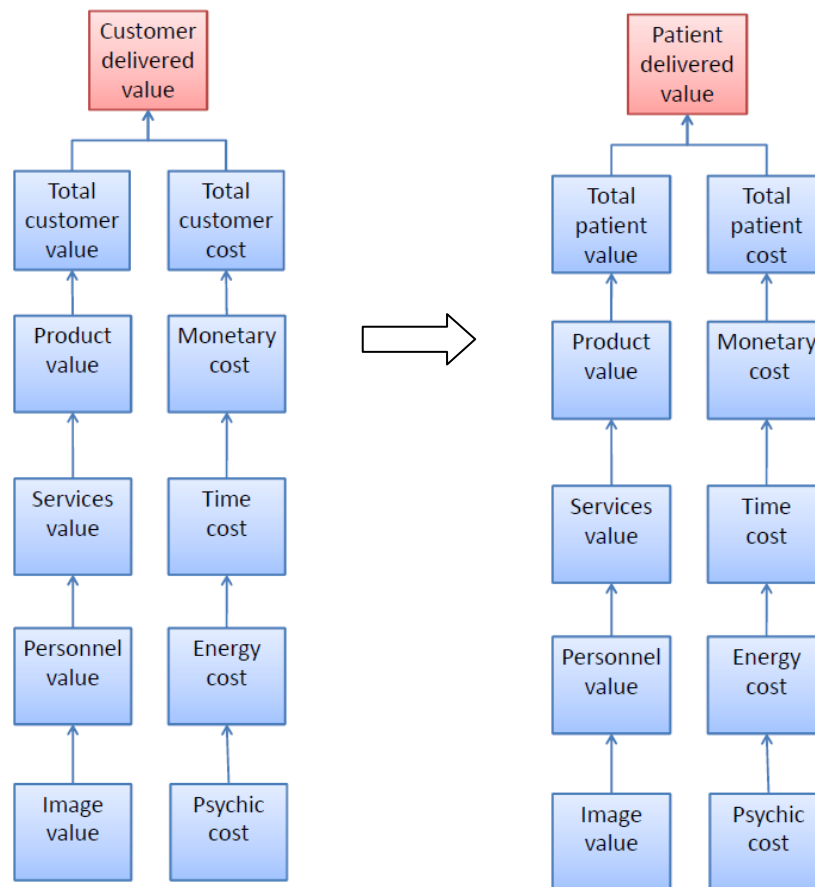


Figure 2: From Kotler’s Determinants of Customer-Delivered Value⁷ to Patient-Delivered Value

Porter and Olmsted define patient value as “Health results per unit of cost”. A health care provider’s strategy should focus on this patient value, not just minimizing costs and maximizing profits for the hospital. In a more competitive environment, the reputation and strategic positioning of a hospital will become more important.

⁷ (Kotler 60)

1.1.2 The Integrated Practice Unit (IPU)

Integrated Practice Units in hospitals are like “key accounts” or “business units” in modern companies. They should be built in a patient-oriented mindset and respect the legacy of the hospital and its demographic environment. IPUs should be based on already existing strengths of the hospital and focus on strategic goals.

In contrast to the resource-based functional organization chart, the Care Delivery Value Chain takes into consideration the full cycle of care. The manager of the IPU is responsible for coordinating and optimizing the whole care delivery process from monitoring/preventing, over diagnosing and preparing, to intervening, and recovering and monitoring/managing. Re-allocating the responsibility from one single function over the full cycle of care is supposed to change the mindset of health care professionals. Instead of optimizing only their own cost account, health care professionals should manage their cases in order to create the best patient value.

Perceived patient value is finally what patients, governments, and health plans are willing to pay. Competition should be positive-sum and inspire the health care professionals to advancing professional practice. Hospitals managed with this strategic tool create a positive environment; at the same time this should increase the reputation of the institution.

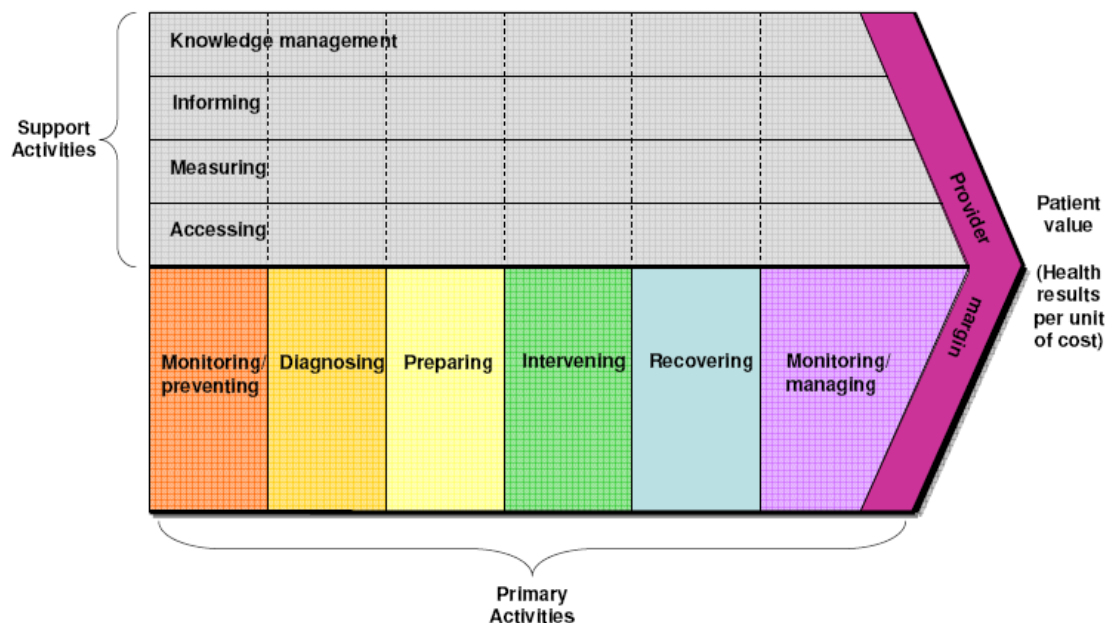


Figure 3: Integrated Practice Units⁸ are patient oriented and cover the whole cycle of care.

⁸ (Porter und Olmsted Teisberg, Redefining Health Care 403)

1.1.3 Competitiveness of Health Care Services in Switzerland

In his 1996 Harvard Business Review article, *What is Strategy?*, Michael Porter comes to the conclusion that during decades, managers made the mistake of focusing their efforts too much on operational effectiveness (which is not strategy). This resulted in a zero-sum competition and can be described as “always run the same race faster”.

To gain competitive advantage, a company or a hospital should “choose to run a different race”. This should result in positive-sum competition and add value for the customer. Hospital managers frequently fall into the trap and neglect strategic positioning of their institutions. Figure 3 shows the interdependence of operational effectiveness and strategic positioning—both together resulting in competitiveness.

Competitiveness of Hospitals⁹

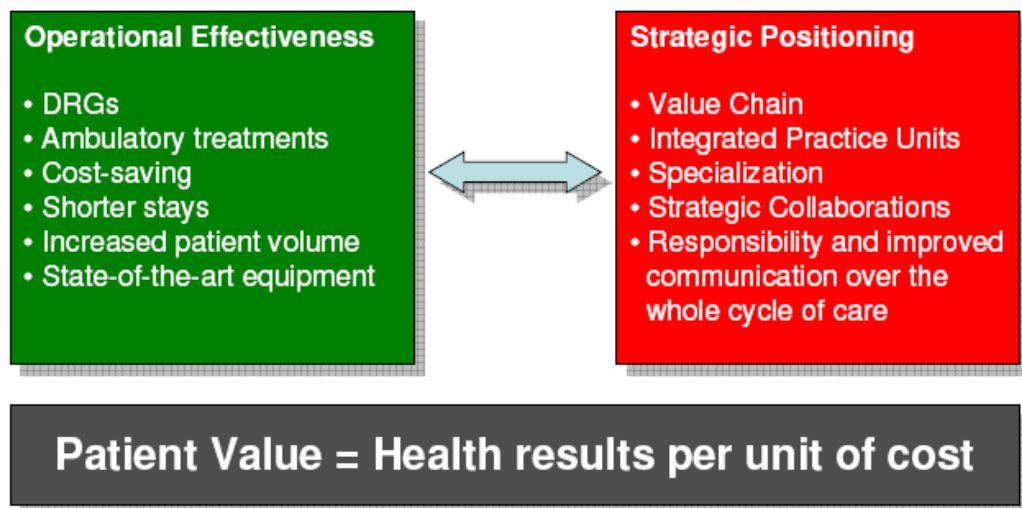


Figure 4: Competitiveness of Hospitals: Operational Effectiveness and Strategic Positioning.

The following paragraphs describe the reasons why both is important to obtain competitive advantage; to focus only on operational effectiveness is not enough. Talking about “competition” among hospitals, many health care professionals still tend to be afraid and suppose “competition” as being destructive; a negative-sum game. Porter’s idea of creating value-based competition on health care results should lead to a positive-sum game.

⁹ Interpretation by Samuel Bühlmann of: (Porter, What is Strategy?)

1.1.3.1 Operational Effectiveness

Operational effectiveness is about having the best equipment, employing the latest technologies, and having the best employees. Hospital director Rémy Rouge stated in an interview¹⁰ with the author that a good reputation of an institution in the public and among employees would be essential for its success. Top health care professionals ask for state-of-the-art equipment and they know exactly about the working conditions in the other hospitals in the region. But having the latest equipment and the most productive employees is not a strategy, yet. The competitive advantage gained by operational effectiveness does usually not last for a long time, because competitors can buy the same machines and poach the top employees from the leading institution.

Hospital financing with Diagnostics Related Groups (DRGs) risks resulting in a zero sum game. With this system, the average cost of a treatment is reimbursed, which should lead expensive health care providers to reduce costs and increase operational effectiveness. However, management by DRGs can harm the quality of a hospital. Instead of delivering patient value, health care professionals risk to focus their services on accounting figures and imposed schedules—to satisfy their resource-based performance indicators set by the accountant. Exaggerated management by DRGs may lead to a treadmill effect: the clinic has to run always faster, but is not reaching their actual goal, which would be the creation of improved patient value. And the larger bureaucracy might swallow all the benefits gained from the reduced costs from improved operational effectiveness—finally resulting in a zero-sum, or even negative-sum game.

The trend to ambulatory treatments is often justified with innovations in medical technology and often helps to save costs. Patient value is also increased, when the patient can go home earlier and go back to work—if the patient is really ready for this. Hospitals managed with very tight schedules risk to send some patients home too early. Ironically, the hospital could even be interested in sending the patient home too early: if the patient comes back to the emergency service one week later, this patient could count as a new case, new benefit for the hospital... Regarding the accounting figures, this hospital would be working with “operational effectiveness”; but it would not be aligned with patient value, it is rather a management trap of cost accounting. Minimizing costs of one department may even raise the costs of another department more than proportional.

Yet, many attempts for cost-minimization, like a shift to more ambulatory treatments, shorter stays, and increasing patient volume, can result in a zero-sum game. Hospital director Rémy Rouge states in an interview¹¹ with the author that with the introduction of new cost accounting measures and the DRGs by the beginning of the 1990ies, the mindset of physicians changed dramatically. Instead of seeing the big picture, the new generation of physicians reduced their scale of responsibility to what got measured. Health care management became set on bureaucracy, and the patient got lost. Hence, operational effectiveness is necessary for the competitiveness of an ophthalmic clinic; nevertheless, it is like “to run the same race faster”.

¹⁰ Interview with Remy Rouge, Hospital Director Regionalspital Bern-Belp, February 20, 2008

¹¹ Interview with Remy Rouge, Hospital Director Regionalspital Bern-Belp, February 20, 2008

1.1.3.2 Strategic Positioning

Strategic positioning is like “to choose to run a different race”. It is about competing to be unique and to produce exclusive value for the customers. This does not mean that it has to be more expensive, but it should be aligned to customers’ needs.

Strategic positioning should also come along with the intuition of a good hospital manager, a commitment for excellence, and common sense. Nevertheless, a systematic approach is strongly recommended. The Value Chain is a helpful tool to analyze a company or an Integrated Practice Unit in a hospital. Breaking down the processes of an IPU into primary activities and support activities suddenly opens the manager’s eyes. Synergies, intersections for strategic collaborations, and strategies for creating unique customer value suddenly become clear. This is strategy!

Furthermore, the demographic shift in the population will change the needs for health care services.¹² There will be more elderly people and an increased demand for geriatric health care institutions. Clinics should study the local needs around their institution and think about their strategic position and where they want to be in a few years. Switzerland has many clinics on the country side, surrounded with a nice landscape and even view on the mountains. Such characteristics are a good basis for a leading geriatric institution. But a nice environment is not enough. The Care Delivery Value Chain offers a suitable tool to analyze the situation of such a clinic and indicates opportunities for improvements. There will also be an increased need for ophthalmic health care services for elderly people, such as cataract surgery or low-vision training. If an eye clinic can match those needs, it could focus its strategic positioning on it and foster formal or informal collaborations in this domain.

If appropriate, health care providers could also position themselves with offering alternative health care like naturopathic treatments. Unique patient care cannot only be offered in luxury wellness resorts. This can be done in every clinic when it positions itself according to the expected patient value in its region. Competition to deliver patient value (health results per unit of cost) is increasing in Switzerland, and it is growing over the national borders. Some large health insurers already signed contracts with high-standard private clinics in Southern Germany (Schwarzwald) to treat Swiss patients at the same costs as in Switzerland, but on a higher quality level. However, this offer is only used by a few patients right now and not very well known. But in some health care areas, patients become increasingly mobile and Swiss health care provider should also consider foreign competitors.

In eye care, patients can get their prescribed drugs to a lower price when they buy them in a foreign country, or they can have an eye surgery done combined with nice holidays at the Mediterranean Sea. Health care tourism is increasing in countries like India, where very well trained health care professionals are working to a much lower cost. On the other hand, Switzerland also offers a good environment to attract health care tourism. As an example, foreigners pay out-of-the-pocket for plastic surgery in Montreux, or they have their eye surgery done in Geneva or Ticino. But such customers do not come from alone. They have to get known to the Swiss clinic, which requires strategic positioning.

The Care Delivery Value Chain is a very practical concept to analyze opportunities for strategic positioning. The manager of an Integrated Practice Unit should be empowered to manage the full cycle of care of the specific disease.

¹² (Swiss Society for Health Policy)

1.2 RESEARCH QUESTION

Patient value is finally what patients, health plans, and the government are willing to pay for a health care service. It is how they perceive the hospital's performance, which Porter and Teisberg define as the "health results per unit of cost".

The objective of this paper is to find answers to the following research question:

"Is Porter's Value Chain a suitable tool to optimize the management of ophthalmic clinics in Switzerland and does it have the potential to significantly improve the patient value?"

The sub-questions to this main research questions are:

- Where are the limitations of this concept in public and private institutions?
- Who should elaborate and manage the Care Delivery Value Chain?
- Are there alternative models?
- What can be done to improve patient value in Swiss ophthalmology clinics?
- How do Value Chains look like when applied to ophthalmology? (elaboration of value chains)

1.3 METHODOLOGY

The project of writing this paper was defined as a mix of primary and secondary research. First, a literature research was conducted with the focus on strategic management publications, especially on health care management. The paper is based to a large part on Porter and Teisberg's *Redefining Health Care*¹³, in particular on chapter 5) "Strategic Implications for Health Care Providers; how to create superior patient value".

Qualitative research was conducted by interviewing hospital directors, ophthalmologists, health care professionals, and patients to investigate their attitudes, perceptions and experience. Moreover, a questionnaire was sent by printed mail to 25 specialists in Switzerland (20 ophthalmologists and 5 hospital managers). The elaboration of the Care Delivery Value Chain examples was done by the author using his former working knowledge. The framework of the paper is divided into a theoretical first part about Care Delivery Value Chains, followed by practice examples. Finally, recommendations and conclusions are drawn.

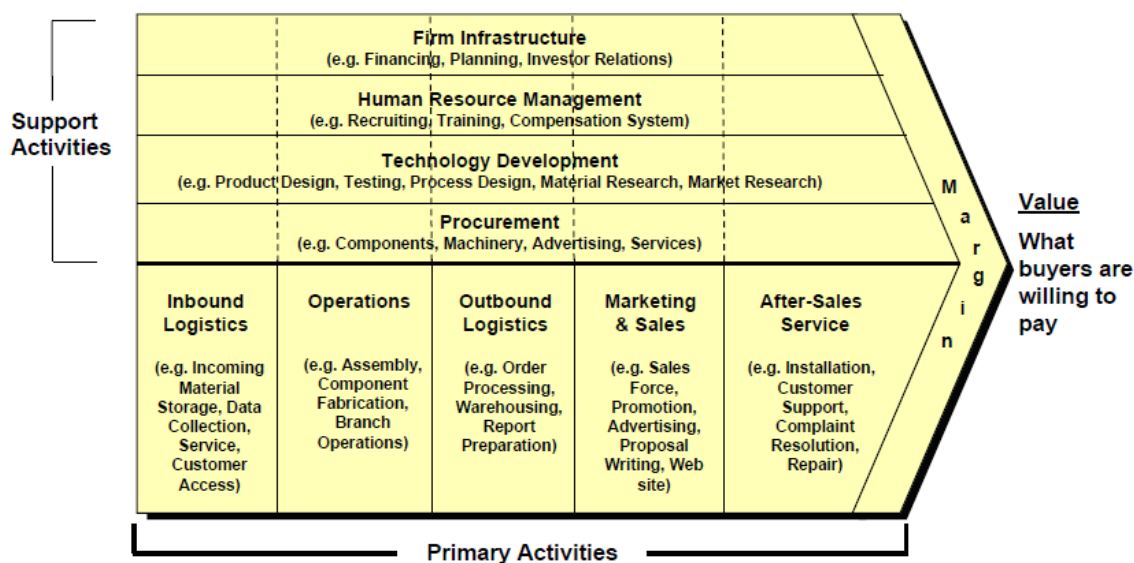
Special issues: during the project work, Swiss health care policy was twice a topic for Swiss citizen in popular votes. There was a political initiative to "increase competition" in the hospital sector, which was defeated by the Swiss—indicating that "competition" among hospitals is still seen rather as a threat than a chance in the general population.

¹³ (Porter und Olmsted Teisberg, *Redefining Health Care*)

2. THE CARE DELIVERY VALUE CHAIN IN THEORY

The Value Chain is a concept to capture the strategic relevant activities of an organization. It was developed by Professor Michael E. Porter and can be traced back to his 1985 Harvard Business Review article, *How Information Gives You Competitive Advantage*¹⁴. It is frequently used to visualize a “Business Unit” in the industry; it breaks the business unit’s value creation process down into primary activities and support activities. The elaboration of a value chain often helps the management of an organization to recognize issues where value and strategic positioning can be optimized.

Porter argues that “competitive advantages arise from choices in the Value Chain”. As an introduction to this topic, Porter’s standard Value Chain is described briefly. Then, the Care Delivery Value Chain is described in more details. Porters basic Value Chain can also be used by a hospital or clinic to analyze general activities, which are not directly associated with care delivery. Such general primary activities would be “Inbound Logistics”, “Operations”, “Outbound Logistics”, “Marketing and Sales”, and “After Sales Services”. Support activities in the basic Value Chain are “Firm Infrastructure” (e.g. financing, planning, investor relations), “Human Resource Management” (e.g. Recruiting, Training, Compensation System), “Technology Development” (e.g. Product Design, testing, process design, material research, market research), and “Procurement” (e.g. components, machinery, advertising, services).



- Competitive advantages arise from choices in the value chain

Figure 5: Sources of Competitive Advantage: Activities and the Value Chain¹⁵

¹⁴ Porter, Michael E., *Competitive Advantage*. (New York: Free Press, 1985)

¹⁵ Porter, Michael E., *Microeconomics of Competitiveness*, Slides Session 2: Industry Competition and Strategy, January 2006.

In contrast to the classic Value Chain, the Care Delivery Value Chain focuses on health care services. The following sections describe the principles of the Care Delivery Value Chain, which could become a standard practice to analyze the strategic positioning of a clinic or hospital.

Therefore, the full cycle of care of a defined medical field is divided in the direct value added primary activities, and indirect value-added support activities. Primary activities are “Monitoring and Preventing”, “Diagnosing”, “Preparing”, “Intervening”, “Recovering”, and “Monitoring and Managing”. Support activities are “Knowledge Management”, “Informing”, “Measuring”, and “Accessing”.

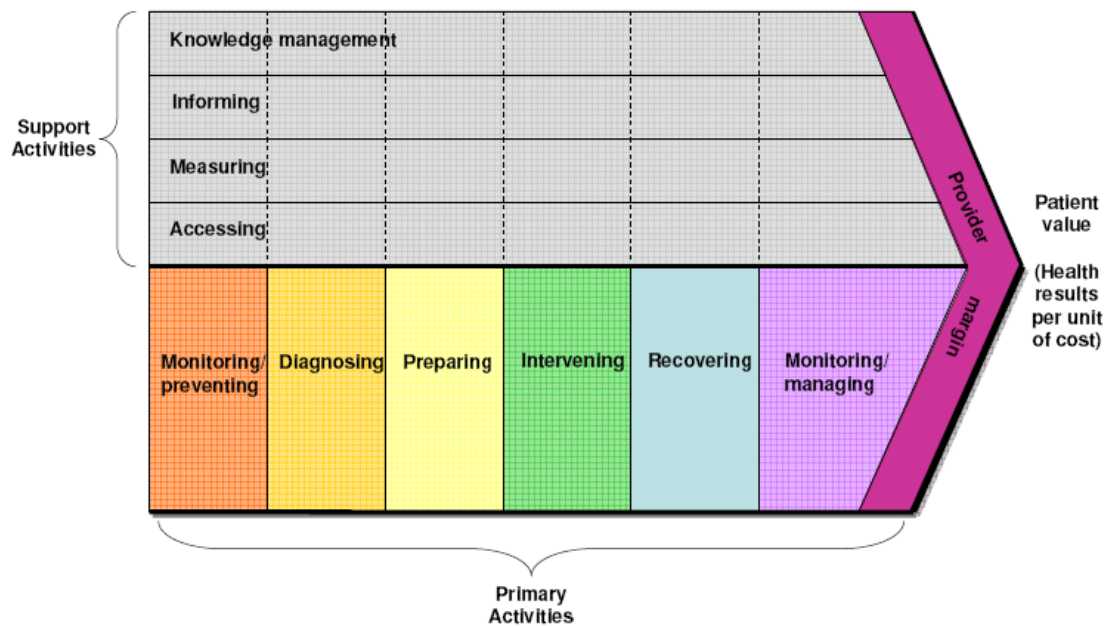


Figure 6: Care Delivery Value Chain Template

The aim of every activity should be to optimize patient value. Porter and Teisberg argue that patient value would be to get the best health results per unit of cost.

2.1 PRIMARY ACTIVITIES

Primary activities are direct value added. They represent the full cycle of care for the patient, from preventing, diagnosing, over preparing, intervening, to recovering, monitoring, and managing:

2.1.1 Monitoring and Preventing

The full cycle of care starts with prevention. It is a legitimate question if an eye clinic’s IPU should be involved in this activities and how far it is the role of the government to run prevention campaigns. However, the Value Chain raises awareness of interceptions of prevention activities with the IPU. It could be a great chance for a hospital to cooperate with public health authorities, schools, patient organizations, and employers of risk groups—and make links to the specialized IPU in the hospital. As long as patient value is increased, this “marketing” of the hospital is justified and is a strategy to position the hospital as center of excellence. The involvement in prevention is a statement of delivering excellent care.

Moreover, the links to referring physicians should be managed carefully. They play a key role for the success of an IPU. As long as the IPU has a good reputation, outpatient physicians will send their cases to this preferred hospital. The IPU can set the pre-conditions for improved collaborations, e.g. by offering an IT platform for knowledge management.

“Monitoring and preventing” also shows opportunities how the IPU can optimize the volume of patient intakes. How do competing hospitals in the region position themselves to get patients? Are they just there and wait until patients arrive? How can the IPU optimize patient value of monitoring and preventing activities?

2.1.2 Diagnosing

Early detection of diseases often helps to reduce their impact on the patient’s health. Hence, early referral to specialists with suitable equipment can improve patient value. However, as patient value is defined as health results per unit of cost, specialized equipment should be allocated in a reasonable manner per region to avoid the effect of offer induced demand (described later in this paper).

In diagnosing, medical and family history should be checked routinely, and, if appropriate, dedicated advanced testing initiated. The IPU should manage the links for communication and consultation with other specialists (e.g. data integration with modern information technology). Finally, the treatment plan is formulated.

2.1.3 Preparing

In order to perform a successful intervention, the patient must get a procedure-specific preparation. A good preparation should optimize the patient’s convenience during the stay in the hospital. High quality orientation, proper information, and transparency increases trust which is an important element for successful health care services.

Ideally, the patient has a contact person, such as a case manager who is accompanying him/her through the stay in the hospital. It may also be an advantage to conduct a needs analysis before an intervention. Sometimes very small things that could easily be changed have a big impact on patient comfort and patient value.

2.1.4 Intervening

Depending on the disease, intervention can occur with drugs and/or with a procedure (e.g. surgery). The most suitable technology should be applied by specialists. Specialization of an IPU should push forward the learning curve and finally boost quality. On the other hand, a clinic less specialized in an intervention should refer the patients to the better clinic and “trade” those referrals against suitable patients for their specialized IPU. Example: vitrectomy is concentrated in clinic A, glaucoma surgery in clinic B.

Clinics of the private “Hirslanden” chain, for example, already promote their cooperations with well-known industry partners to state their commitment to the latest technologies and high-tech interventions.

2.1.5 Recovering and Rehabilitating

Patient value is not only delivered by the intervention. Many (still) resource-oriented hospitals neglect the importance of recovering and rehabilitating. As in modern business, “after sales service” is crucial for a company’s reputation, success, and even survival. Ophthalmic clinics in Switzerland have the chance to position themselves with a better recovering and rehabilitating environment. It does not have to be more expensive, but better aligned with the patient’s expectations.

Re-hospitalizations due to neglected recovering after an intervention should be avoided and there must not be economic incentives to “produce” such emergency cases.

Again, a suitable needs analysis should be conducted with the patient. The drug regimen should be fine-tuned. There should be an incentive to find best regimen for patient, not for the doctor’s income. Finally, creating patient value has a lot to do with patient orientation. Cost accounting is also important, but the patient should feel like a human and not like a number.

2.1.6 Monitoring and Managing

In monitoring and managing, the IPU should keep a track record of their patients. To reach excellence, health care professionals should always learn and improve. The patient’s compliance to the drug regimen should be followed-up.

2.2 SUPPORT ACTIVITIES

Are not direct value-added, but are also an essential part of the Value Chain. Like the primary activities, all support activities are supposed to be aligned to the stakeholders’ needs and create patient value. Especially in health care, communications is very important. Support activities visualized in the Care Delivery Value Chain are analyzed in order to discover synergies.

2.2.1 Knowledge Management

Like in successful companies, knowledge management is also the key to success in hospitals. Learning from mistakes is important to enhance professional practice. When collaborating with referring ophthalmologists, this issue becomes even more important.

To guarantee communication, feedback loops must work. The visualization with the Care Delivery Value Chain makes those links more evident; as well as for internal as for external communication. Defined feedback loops also increase trust within the Integrated Practice Unit, which stimulates synergies and the overall performance of the hospital. If the responsibility for the performance of the IPU is spread over the full cycle of care, single entities of the IPU will deliver a better quality of the information more openly. The author supposes that due to today’s performance measurement tools, important information about the patient could be lost because feedback is not given optimally.

Furthermore, accessibility to this knowledge should be enhanced. With today’s information technology, especially the Internet, information about state of the art treatments is widely made available. But due to data protection issues in Switzerland, the accessibility to patient data is hindered. This reduces the potential patient value in regards of completeness, relevance, and applicability of the data. It is not only a matter of data protection; it is also a matter of technology standards. There are a few potential technologies, such as patient smart cards.

2.2.2 Informing

Informing is about communications with the patient. It starts with risk factor and lifestyle counseling under “monitoring and preventing”. While diagnosing, the implications have to be explained. Before the intervention, the patient has to be educated on procedures. Finally, the patient’s compliance to the treatment has to be followed-up. Good health care professionals are trained in adequately informing patients.

However, daily routine may lead them to shorten this information. Informing is an important support activity which could be professionalized with a case manager within the IPU who accompany patients during their stay in the hospital and also inform patients before and after their intervention.

2.2.3 Measuring

Suitable technology should be available to correctly measure the patients’ eyes. Good physicians may choose the clinic they want to work also concerning the state-of-the-art equipment available to perform their work.

Though, the most expensive equipment may even reduce “patient value” (health results per unit of cost) when unimportant things are measured. It should be taken care of the critical mass of measurement equipment of what is needed in the target population of the hospital.

2.2.4 Accessing

What may sound as a matter of course is sometimes not obvious in hospitals. Physical access to the eye clinic can be managed and enhanced. For visually handicapped persons, stairs could be dangerous, or they cannot find the office. An eye clinic’s offices can be clustered together in a logical way. An outstanding eye clinic offers an access plan to the labs and offices. Emergency services must be accessible, or, if not available on weekends, patients must find access information easily.

A regional hospital chain in the region of Berne offered emergency information service over an expensive 0900 telephone number—and was not aware that many households had those numbers blocked because of inappropriate content providers. Managing accessing means to co-ordinate office, lab, and hospital visits, as well as providing access to information via telephone or internet interactions.

3. PRACTICE EXAMPLES

The following three propositions of Care Delivery Value Chains for ophthalmic clinics in Switzerland have been elaborated by the author and proposed to ophthalmologists. It has to be stated that a value chain is not something carved in stone. It is rather an exercise for hospital managers and health care professionals to broadly analyze their care delivery activities and processes. It combines an in-depth analysis of the eye clinic with strategy development.

Porter argues that competitive advantage arises from choices in the value chain. While elaborating the care delivery value chain, hospital managers can recognize relative strengths and weaknesses of their clinic, which is the basis to define core competences and enables the definition of competitive strategies.

3.1 THE INTEGRATED PRACTICE UNIT FOR GLAUCOMA

Glaucoma is a widespread disease in Switzerland and often remains undetected until irreversible visual field loss has occurred. Raised intraocular pressure (IOP) is a significant risk factor for developing glaucoma. Monitoring IOP is a key in glaucoma prevention, especially when the patient has risk factors like family history, race, or age. In countries like the Netherlands, public health authorities promote free IOP screening in optician shops to reach the broad mass and people with abnormal IOP are referred to specialists early.

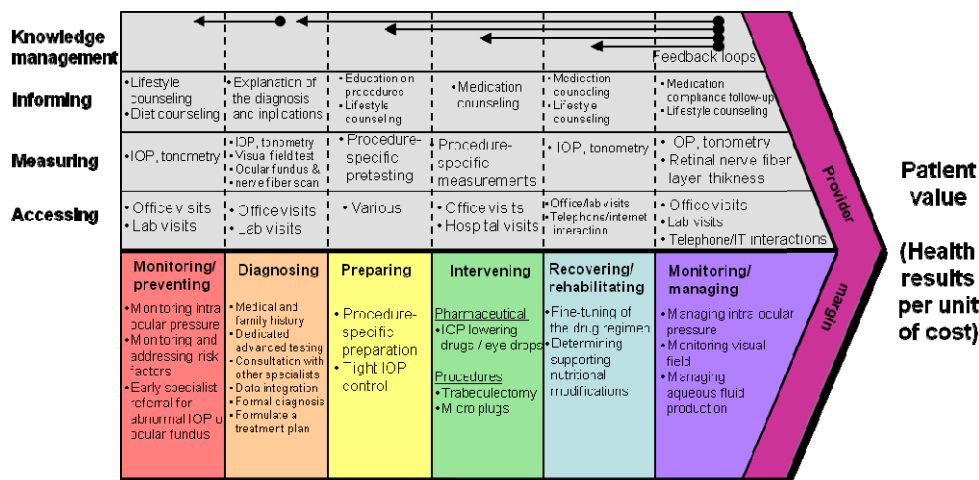


Figure 7: Care Delivery Value Chain for Glaucoma

Public awareness about glaucoma is important to screen and treat patients before irreversible visual field loss has occurred. A committed eye clinic can position its center of excellence for glaucoma by actively informing risk groups and conducting glaucoma events. Private ophthalmologist offices will send their patients to the most dedicated clinic in the region, or patients will even travel longer distances to be treated in a clinic, or by a specialist, with a high

reputation. In diagnosing glaucoma, medical and family history is important, and state-of-the-art equipment is used in the laboratory, and the treatment plan is formulated, if necessary in consultation with other specialists. The intervention to treat glaucoma can be pharmaceutical with IOP lowering drugs, or with a surgery. Especially glaucoma surgeries go along with a learning curve and routine of the ophthalmic surgeon.

It would be wise to allocate the “critical mass” (enough) patients to such a specialist to reach the optimal patient value in a region. Too many “average” clinics without the required momentum in a geographic region might even reduce patient value. With proper recovering and rehabilitating (especially after a surgery), re-hospitalizations should be avoided. Medication counseling and fine-tuning of the drug regimen should be made carefully and together with “monitoring and managing”, a medication compliance follow-up should be made to receive an optimal health outcome.

Not every eye clinic must have “the best” glaucoma center with the most expensive equipment and offer all kind of interventions to deliver patient value. As described before, competition only on operational effectiveness may become destructive. With the value chain analysis, ophthalmologists and hospital managers can define their strategic positioning compared to other clinics in the region and start to compete on unique patient value.

3.2 THE INTEGRATED PRACTICE UNIT FOR SENILE CATARACT

Over the past decade, cataract surgery has emerged from a competence of only a few specialists at university eye clinics to a routine intervention performed by many ophthalmologists in Switzerland. Cataract surgery has been facilitated due to innovations in medical technology: on one side, phaco surgery machines became more sophisticated, on the other side, new intra ocular lenses with new materials, surface treatments and designs called for better machines. Those two forces pushed the cataract surgery business to innovate faster. The cataract surgery supply business is a very nice example of positive-sum competition. Suppliers were forced to innovate and create supreme customer value—or they went out of business.

Furthermore, the cataract surgery business is also a very interesting economic example of the effects of price fixing by the government and health plans. When only a few specialists performed cataract surgery in Switzerland, the reimbursement price for an intra ocular lens was fixed on a realistic price for a medical device enabling this complex intervention at this time. The health economic value of a person who doesn't get blind is very high and would even allow a much higher price.

As technology developed, more and more ophthalmologists specialized in cataract surgery, and it shifted progressively towards a “business” of ophthalmologists in private practice who rented surgery rooms in hospitals to conduct surgery on their private patients. There was a tendency of offer induced demand when private office ophthalmologists performing cataract surgery started to persuade their patients to have cataract surgery earlier than ophthalmologists who did not perform cataract surgery.

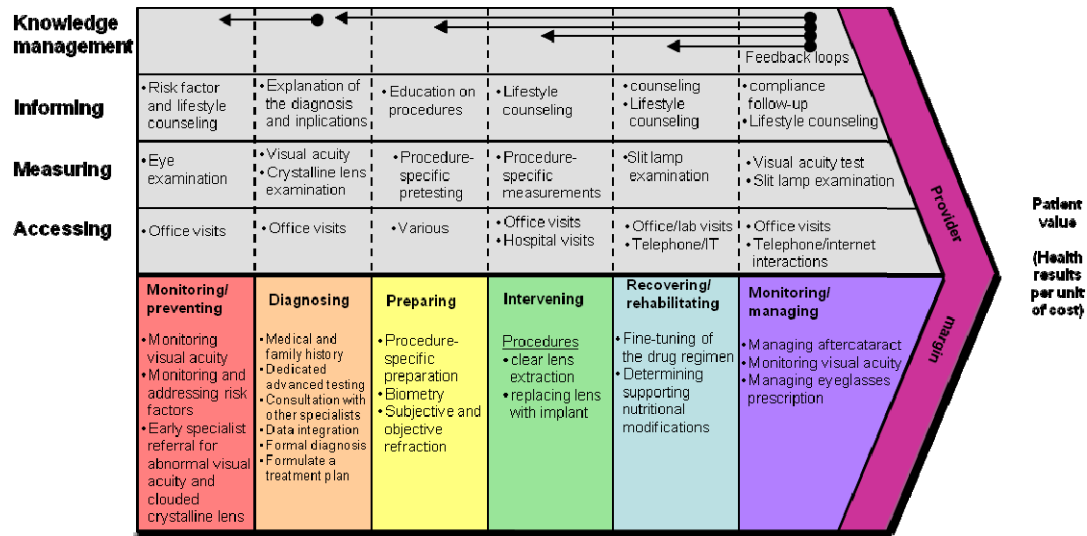


Figure 8: Care Delivery Value Chain for Senile Cataract

The introduction of the TARMED reimbursement system in 2004 reduced the financial attractiveness of cataract surgery for ophthalmologists. Therefore, a large part went back to the public eye clinics and the younger generation of ophthalmologists who were willing to do the intervention for a lower price.

The challenge of the ophthalmic clinic is now to position itself in this new market environment. Using the concept of the Care Delivery Value Chain, the responsible manager of the Integrated Practice Unit for cataract will start to analyze the primary activities of the value chain.

Monitoring and preventing senile cataract is usually done in private ophthalmology offices, when patients come to eye examinations when they feel that their visual acuity was reduced. The ophthalmologists checks the patient's crystalline lens if it is clouded. If it is clouded, he will refer to the specialized ophthalmic clinic of his choice. An important part of the IPU manager's job is to position his eye clinic as the preferred clinic for cataract surgery in the region. How can the clinic increase patient value in monitoring and preventing?

Clear communications and knowledge-management can be improved for preventing senile cataract. For example, the IPU manager can initiate public awareness campaigns addressing the risk factors like exposure to extreme ultraviolet radiation and to promote the wearing of sunglasses. Local organizations, schools, sports clubs, etc., could be interested in this information and the eye clinic could position itself as a center of excellence for cataract.

Diagnosing cataract and formulating the treatment plan should be aligned with patient value, and not according to the financial interest of the ophthalmologist or the clinic. Because of asymmetric information, cataract patients risk to be treated earlier than necessary. Honest information and explanation of the diagnosis and its implications would increase patient value and the reputation of the clinic. Unfortunately, this service is not measured by today's cost accounting systems and in the Swiss setting.

Patient value can also be increased by correct education on the procedure. The patient feels much more comfortable when he or she feels to be in competent hands. Procedures around the surgery are more likely to run smoothly when done in a trustworthy environment. Complications can be avoided when the patient behaves how he or she was instructed.

Offer Induced Demand^{16 17}

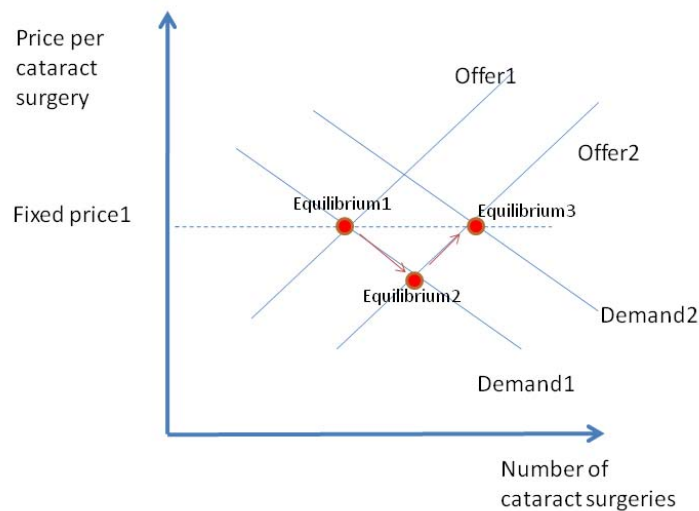


Figure 9: Offer Induced Demand

There is a potential of increasing recovering and rehabilitating issues with modern information technology. Instead of just receiving the bill, randomized surveys about patient satisfaction could be sent. More professional fine-tuning of the glasses prescription could increase the patient value. Furthermore, lifestyle counseling and compliance follow-up could be done with modern information technology—which could make the patient’s stay in the ophthalmic clinic a very positive experience and the patient would recommend the clinic to friends.

To summarize, many small issues can make the difference in strategic positioning of an ophthalmic clinic and its Integrated Practice Unit for Senile Cataract. If managed properly, it will soon become a center of excellence, which attracts the best surgeons and the referrals of private practice ophthalmologists. This environment boosts patient value and finally also the provider margin of the clinic. Other eye clinics in the region will be forced to increase their patient value as well—which is a positive-sum game.

¹⁶ (Abbe-Decaroux 27)

¹⁷ (Domenighetti)

3.3 THE INTEGRATED PRACTICE UNIT FOR REFRACTIVE SURGERY

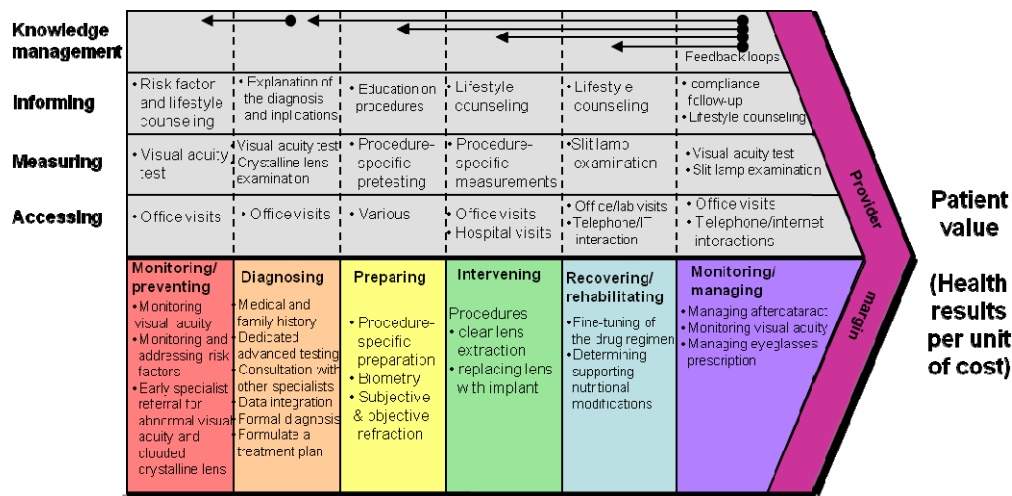


Figure 10: Care Delivery Value Chain for Refractive Surgery

Refractive Surgery is usually not reimbursed in Switzerland and therefore not regulated by the government. It is a good example of how competition and entrepreneurship can create a very lucrative and patient value creating business. It has to be stated that refractive surgery cannot be taken as an example for most diseases, but it is an interesting case to analyze with the Value Chain.

One could argue that a more accurate name would be “Integrated Practice Unit for Myopia, Hyperopia, and Astigmatism”, and that refractive surgery would be the “procedure” to treat the eye. Such a unit would include ophthalmic optics with providing glasses and dispensing contact lenses and would be cumbersome to manage. In such a possible case, refractive surgery could be managed as a Sub-IPU within the large IPU.

Laser treatments of refractive errors of human eyes can be traced back to 1986 for Photoablative Refractive Keratectomy (PRK), or 1991 for the first Laser-in-situ-keratomileusis (LASIK) treatment. The technology emerged with the development of computer technology and the worldwide leading suppliers of such laser systems came from Southern Germany, a region with a legacy in optics (e.g. Carl Zeiss, Jenoptik) and with the necessary related and supporting industries. At leading research institutions, emerging technologies were combined with medicine, resulting in innovation. In 2002, three of the five worldwide leading suppliers of such laser systems were located in Southern Germany. This is another example how regional competition increases inspiration and pushes companies to innovate faster than companies in less competitive environments.

In the case of Refractive Surgery, the manager of the Integrated Practice Unit would rather replace “patient” with “customer”, and “Monitoring and Preventing” with “Customer acquisition”, or “Inbound Logistics”, as it is in the original Value Chain used in other industries. As medical doctors in Switzerland are not allowed to make publicity for their services, some of them soon recognized that in the company name of their center for refractive surgery, public relation and awareness activities can be made. Information evenings are organized, where the surgeon informs the interested people about the intervention and what can be expected.

Patient value of refractive surgery is highest for sportive young customers (around 30 years) yet without suffering from presbyopia. They are often wealthy, living in double-income households without kids and can afford luxury. Successful eye clinics with centers for refractive surgery often target on those customers, positioning themselves with fancy high-tech furnishing and accessories. They rather sell a life-style experience than a surgery.

LASIK treatments are usually sold in packages, including an ample eye examination, in-depth explanations on the procedure, comfort, free coffee or soft drinks, several rechecks after the surgery and often a guarantee for a free re-treatment if something happened or the patient is not happy with the outcome. Refractive surgery is a good example for patient value oriented health care services.

The staff of centers for refractive eye surgery is often extremely friendly. They like their job and their patients are grateful to be able see without glasses, which motivates the staff again. They receive positive feedback and are also proud to work in the leading center in the region. Motivation and commitment for excellence is a positive-sum game.

4. CARE DELIVERY VALUE CHAIN SURVEY

Between November 10 and 30, 2008, a survey about Care Delivery Value Chains for ophthalmic clinics was conducted in Switzerland. Therefore, a fact sheet about the topic and three value chain examples were sent by printed mail together with a questionnaire to 25 specialists (20 ophthalmologists and 5 hospital managers). The fact sheet and the questionnaire are attached as appendix to this paper.

In order to receive a broad picture, the survey was sent to private, as well as to public and teaching eye clinics, and to private practitioners who work in clinics. The survey was sent to specialists in eleven different cantons (GE, VD, VS, BE, SO, BS, BL, AG, ZH, LU, TI) and response came from five cantons (BE, VD, TI, SO, ZH).

The response quote was 32% (8 persons; 6 ophthalmologists and 2 hospital managers, whereas a third manager is also an ophthalmologist). During the time of the survey, international ophthalmology congresses took place, which partly could explain that the response quote was not higher. But for this rather complex topic, the interest was high. The survey was not sponsored by a third party.

However, it has to be stated that opinions from eight specialists are not representative for all ophthalmologists in Switzerland. Therefore, a larger sponsored survey should be conducted. The goal of the survey was to feel a first reaction of the specialists on the topic.

The questions were about three topics: about strategic management, about their perception of the potential of the Value Chain analysis, and about their point of view about competition in health care. The feedback questionnaire was collected anonymously with indication of the canton of the clinic. To every set of questions, space was provided to write comments; several interesting inputs came from such remarks.

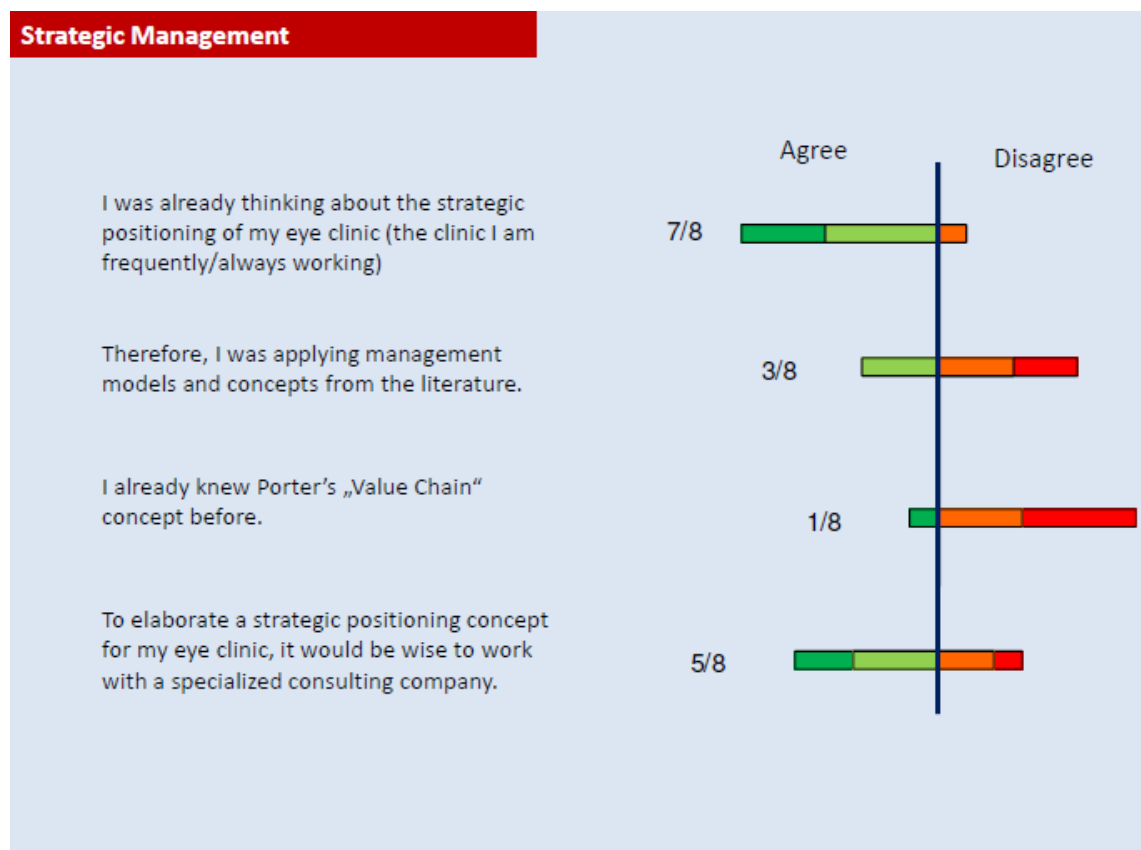
The methodology of the questionnaire was basically based on surveys used in sociology with a statement and the four answers "I agree completely", "I agree", "I do not agree", and "I do not agree completely". The "neutral" answer was not provided, because the author was interested in the tendency, whether the specialists were rather for or against the statement.

As a remark to the population sample asked in the survey, it has to be stated that a majority of 5/8 of the answers received came from the private sector. It seems like ophthalmologists working in private practice and/or private clinics tend to have more entrepreneurial spirit and interest in business topics like strategic positioning and competition.

4.1 STRATEGIC MANAGEMENT

Interestingly, almost every ophthalmologist and hospital manager would say that he or she was already thinking about the strategic positioning of the eye clinic he or she is working. But only a few (3/8) applied management models and concepts from the literature therefore. And Porter's Value Chain concept was unknown by the majority (7/8).

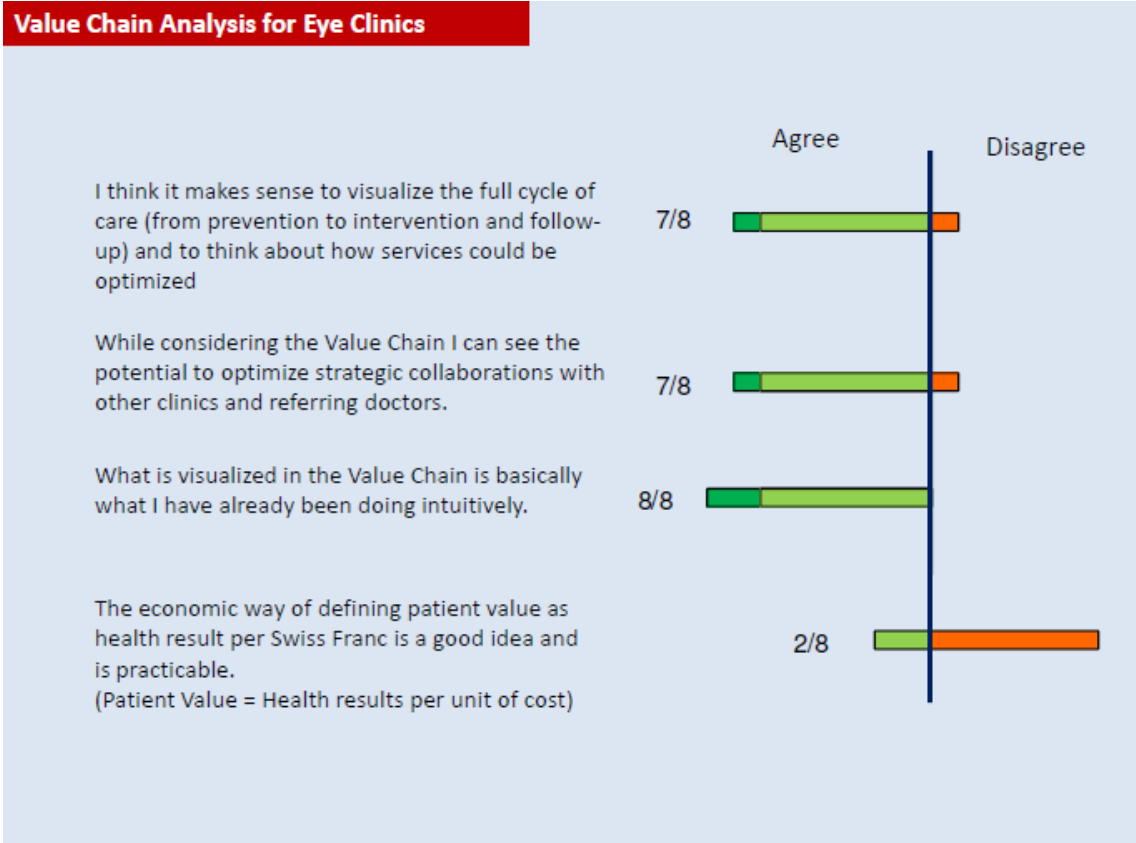
It was also interesting to see that all ophthalmologists (8/8) would agree that it would be wise to work with a specialized consulting company to elaborate a strategic positioning concept for the eye clinic. On the other hand, hospital managers in administration tend to identify strategic management as their own issue and disagree to this question.



4.2 VALUE CHAIN ANALYSIS FOR EYE CLINICS

Every participant of the survey agrees that he or she has already been doing intuitively what is visualized in the Value Chain. This is a good message to Porter; people working in practice can briefly identify themselves with the concept. The majority (7/8) thinks that it makes sense to visualize the full cycle of care with the value chain and to think about how their health care services could be optimized, and they see the potential to optimize strategic collaborations with other clinics and referring doctors.

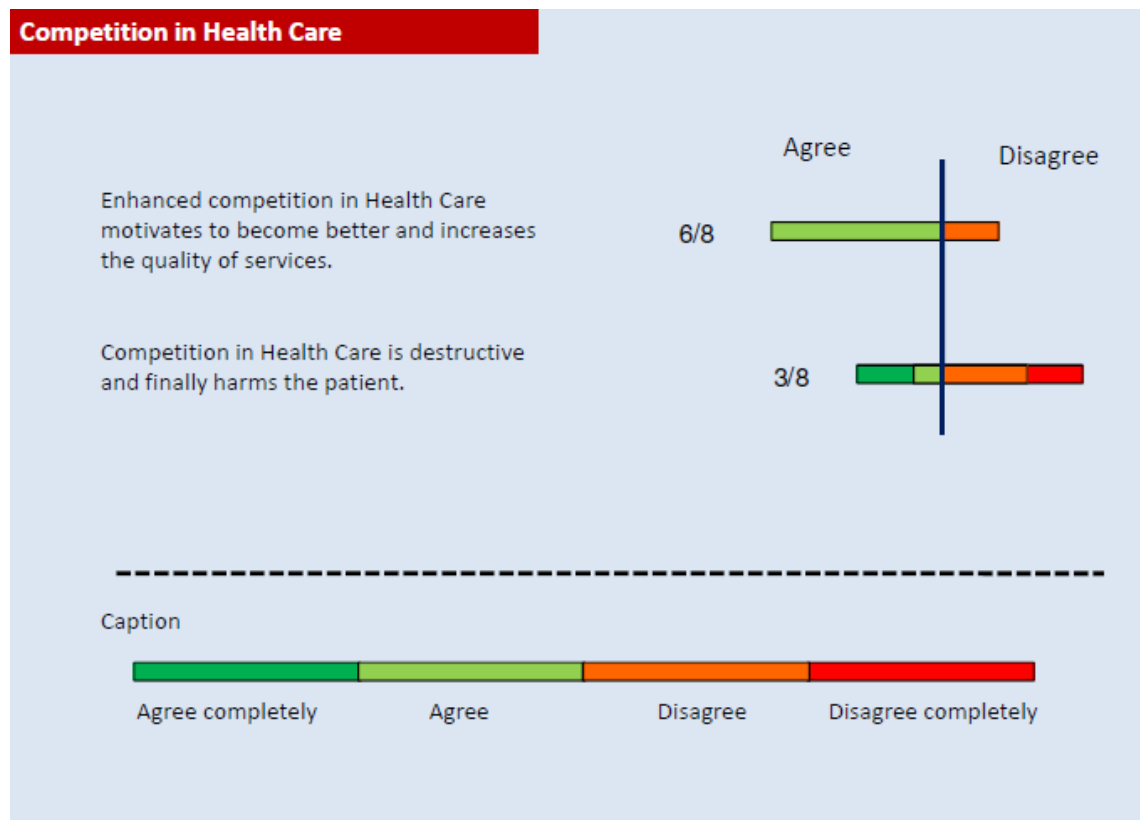
On the other hand, the economic definition of patient value as “health result per unit of cost” was not understood by the majority (6/8). They think that it would not be a good idea and that it is not practicable. One ophthalmologist even added a comment “We are humans and not Swiss Francs!”



4.3 COMPETITION IN HEALTH CARE

Competition in health care is a rather controversial topic. Surprisingly, the majority (6/8) of participants were of a positive attitude towards competition. They would agree that enhanced competition in health care motivates to become better and increases the quality of services. Several participants would even strongly disagree that competition in health care would be destructive and harm the patient.

While analysing this data, the author had to commit that the number of answers might be too low to draw a direct conclusion: maybe only specialists interested in strategy and competition studied the fact sheet and sent back the questionnaire. But Porter's assumption seems to be true that value-based competition on health care results should lead to a better health care system. A majority of 5/8 would consider implementing the Care Delivery Value Chain analysis in their eye clinics.



Other Questions

After having heard about the Care Delivery Value Chain Analysis for ophthalmic clinics, now, would you consider to implement it in your clinic?



I am working in a public clinic 3/8

I am working in a private clinic 5/8

I am an ophthalmologist 6/8

I am working in administration/hospital management (1x ophthalmologist and manager) 3/8

Canton of my clinic BE, VD, TI, SO ZH

n = 8 Swiss ophthalmologists and ophthalmic clinic managers
 Anonymous questionnaire by printed mail from November 10 to 30,
 sent to 20 ophthalmologists and 5 managers

5. RECOMMENDATIONS AND CONCLUSIONS

Essentially, I argue that a correct use of the value chain concept leads to increased patient value and therefore to a competitive advantage for the eye clinic. It provides the framework for strategic decision making. Today's health care management tends to focus too much on the hospital's resources and operational effectiveness. The Value Chain is a framework to optimize strategic positioning of hospitals. Competitive hospitals deliver increased patient value. Swiss hospital management should put systematic focus on delivering patient value. Just saving on operational effectiveness is not enough.

As hospital director Remy Rouge stated in an interview¹⁸ with the author, there are still too many "passive" hospitals in Switzerland, just waiting for the patients to come. Until recently, they earned enough money like this and they are of the opinion that they fulfill their job by being there if needed. Because of asymmetric information, patients did not know about the quality of the institution and health plans had to pay the treatment. In today's changing environment this could be dangerous. Once a national performance indicator system is made public, every hospital has to be concerned about its quality, patient value and strategic positioning.

In an e-mail with the author, *Redefining Health Care* author Elizabeth Olmsted Teisberg put emphasis on the definition of patient value as "health results per unit of cost". Correctly measured, this indicator should allow direct comparison between hospitals.¹⁹ A policy change where the government publishes quality indicators of hospitals is expected soon in Switzerland. This step will induce more "market" and competition on results in the Swiss health care sector, which hopefully will turn out as a positive-sum game for all involved parties.

5.1 HOW TO MANAGE THE CARE DELIVERY VALUE CHAIN

The Care Delivery Value Chain is not more and not less than a tool to study and optimize the full cycle of care in a health care provider. Ideally, a hospital should be organized in Integrated Practice Units (IPU), each specialized in a disease or related group of diseases, and dedicated to reach excellence in creating patient value in its region. The value chains for each IPU should be elaborated in a workshop with responsible ophthalmologists, and administrative people with decision power. See the former chapters of this paper for elaboration details and consult chapter 5 in *Redefining Health Care*.

Once the strategy is set by the top management, a "case manager" could manage the cross-functional links, guide patients through the care delivery process, and represent the IPU towards third parties. This case manager does not have to be a physician. A nurse with an education in health care management, or business administration graduates with a flair for health care could do this job very well. This would be a future-oriented way to manage an eye clinic and face the upcoming competition.

¹⁸ Interview with Remy Rouge, Hospital Director Regionalspital Bern-Belp, February 20, 2008

¹⁹ Elizabeth Teisberg e-mail July 17, 2007

Porter and Teisberg also see a potential in geographic expansion of highly specialized IPUs by providing their services in other cities and other hospitals, eventually with branded services where customers (patients) and health plans recognize a value in it. Some private organizations already apply a similar concept in the refractive surgery business. Proficiency in a field can be copied and applied in other geographic regions, which could create increased patient value and economic success.

Strategic collaborations with referring institutions can be made formally or informally. The value chain is also a systematic approach to discover synergies with other ophthalmologists. The key is in the transformation of “resource-based” management towards a customer (patient) oriented mindset, always with the aim to optimize patient value.

Critical issues in managing the value chain are responsibility and the provider margin. In management, responsibility, room for action, and participation on success should be equally allocated. Without incentives, a hospital is little motivated in taking more responsibility for its business; on the other hand, the government and health plans cannot expect the hospitals to be entrepreneurial from one day to the other, without providing them responsibility and the necessary room for action.

Moreover, the role of the patient should also move from being passive towards taking more responsibility to the own health. In Appendix III, an approach of an assessment form for advanced communications between health care professionals is provided.

The future will show if there will be a case based lump sum payment per patient, based on value-based medicine. Health care provider with a high patient value (health result per unit of cost) would gain, and providers with a low quality would run out of business

There are also risks like over-specialization to be considered when introducing the value chain approach. The hospital has to consider of the critical mass of patients within the region. There is a regional capacity trap. As specialization comes along with higher costs (higher salary of specialist, more expensive equipment), such costs could even shrink patient value (health result per unit of cost). The effect of offer-induced demand (Domenighetti) should be avoided. However, it is already a fact if statistical data of cost are compared by regions with a high density of specialized centers and regions with a lower density (Interlaken versus Bern, or Appenzell versus Zurich).

The method of analyzing the strategic positioning of a clinic with the value chain can be an essential help to understand the organization. It is not widely known, yet, and needs to get acceptance by hospital management. Institutions introducing value-based management also face challenges with the changing culture within the organization.

5.2 LIMITATIONS OF THE CARE DELIVERY VALUE CHAIN CONCEPT

In their book *Strategisches Management*²⁰, Prof. Peter Abplanalp and Prof. Roman Lombriser cite problems of the application of the basic value chain concept, which are also relevant for the care delivery value chain.

First, the value chain analysis comes along with a considerable amount of time and effort, as well as with a methodological complexity. In practice, “strategic planning” is often done in executive meetings, where managers have no time to model. However, the value chain could be used during the preparation of such a meeting.

Then, the value activities within the value chain do not really go along with the existing cost accounting system of the hospital. The allocation of costs to the value activities is very difficult and discretionary. Especially in health care, where activities are stretched over many different providers.

In public settings, it might be difficult to receive the necessary responsibility and room for action to apply this rather entrepreneurial model. The Swiss Federal Office of Public Health is aware of competition issues among Swiss health care providers and is working on the publication of quality indicators of hospitals.

The commitment to introduce value chains must also come from top down. Care delivery value chains can be made on the micro-level in hospitals, even with sub-units, as well as on a regional, or even on the national level, incorporating a variety of different health care providers. The effect of the introduction of value chains cannot be measured immediately. It needs 3-5 years to measure the effect of a new strategy.

Finally, management models like the care delivery value chain risk being applied and interpreted wrongly. New key performance indicators on quality and patient value risk becoming misinterpreted and susceptible. It is a fact that “what gets measured gets done” and that important other issues are left beside. The human factor must not be neglected while introducing such a new approach.

5.3 NEXT STEPS

As a further step, the fact sheet and the sample value chains (see Appendix) should be validated in practice. Interested eye clinics are invited to contact the author and the supervising professors of this paper to enhance professional practice. Moreover, the findings of this paper about care delivery value chains and strategic positioning of health care providers can be applied in further fields in hospitals.

²⁰ (Abplanalp und Lombriser)

5.4 ALTERNATIVE MODELS

5.4.1 The European Foundation for Quality Management (EFQM) Excellence Model

The EFQM excellence model is a non-prescriptive framework based on nine criteria, each with a specific weighting. Five of these are 'enablers' and four are 'results'. The 'enabler' criteria cover what an organization does. The 'results' criteria cover what an organization achieves. 'Enablers' cause 'results'. The model recognizes that there are many approaches to achieving sustainable excellence in all aspects of performance and is based on the premise that excellent results with respect to performance, customers, personnel and society are achieved through partnerships, resources and processes. ²¹

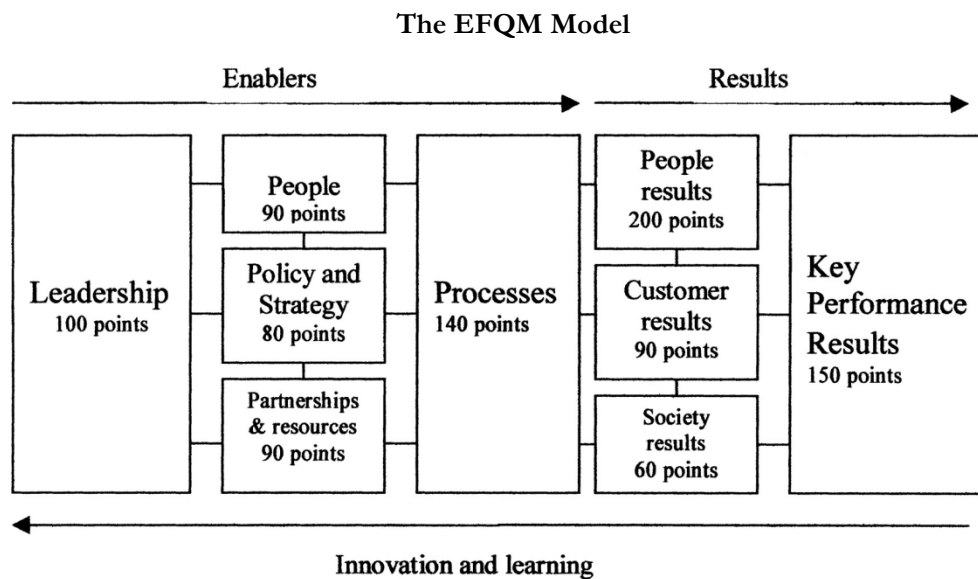


Figure 11: The EFQM Model

The model's nine boxes, shown in the figure above, represent the criteria against which an organization's progress towards excellence is assessed. Each of the nine criteria has a definition, which explains the meaning of that criterion at a high level. To develop the high level meaning further, each criterion is supported by a number of subcriteria. Subcriteria pose a number of questions that should be considered in the course of an assessment. Finally, below each subcriterion is a list of possible areas to address. The areas to address are not mandatory nor are they exhaustive lists but are intended to exemplify further the meaning of the subcriterion.

Assessment of 'enablers' is based on two aspects: the 'approach' and the 'degree of implementation'. 'Approach' addresses the organization's planning, which must be based on its mission, must be systematic, preventative, accurate, integrated into well-defined processes and reviewed systematically. 'Implementation' addresses whether or not the approach is actually being carried out and whether it is being evaluated systematically.

Assessment of the results looks at positive trends over time, the degree of achievement of the objectives stated in the strategic planning and the comparison with internal and external organizations. Scores for the assessment of 'enablers' and 'results' are the average of the score of each subcriterion and rank from 0 to 100. ²²

²¹ (Gené-Badia, Jodar-Solà und Peguero-Rodriguez)

²² (Gené-Badia, Jodar-Solà und Peguero-Rodriguez)

5.4.2 The Baldrige Health Care Criteria for Performance Excellence Framework²³

Excellence are embodied in seven Categories, as follows:

1. **Leadership**
2. **Strategic Planning**
3. **Focus on Patients, Other Customers, and Markets**
4. **Measurement, Analysis, and Knowledge Management**
5. **Workforce Focus**
6. **Process Management**
7. **Results**

The figure below provides the framework connecting and integrating the Categories. From top to bottom, the framework has the following basic elements.

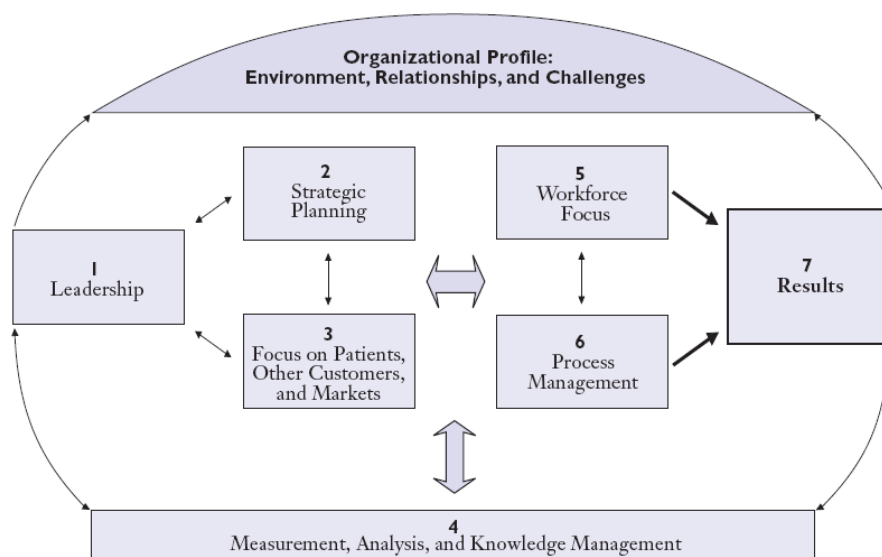


Figure 12: The Baldrige Performance Framework

Organizational Profile

Your Organizational Profile (top of figure) sets the context for the way your organization operates. Your environment, key working relationships, and strategic challenges and advantages serve as an overarching guide for your organizational performance management system.

System Operations

The system operations are composed of the six Baldrige Categories in the center of the figure that define your operations and the results you achieve. Leadership (Category 1), Strategic Planning (Category 2), and Focus on Patients, Other Customers, and Markets (Category 3) represent the leadership triad. These Categories are placed together to emphasize the importance of a leadership

²³ (American Society for Quality)

focus on strategy and patients and other customers. Senior leaders set your organizational direction and seek future opportunities for your organization.

Workforce Focus (Category 5), Process Management (Category 6), and Results (Category 7) represent the results triad. Your organization's workforce and key processes accomplish the work of the organization that yields your overall performance results.

All actions point toward Results—a composite of health care, patient and other customer, market and financial, and internal operational performance results, including workforce, leadership, governance, and social responsibility results.

The horizontal arrow in the center of the framework links the leadership triad to the results triad, a linkage critical to organizational success. Furthermore, the arrow indicates the central relationship between Leadership (Category 1) and Results (Category 7). The two-headed arrows indicate the importance of feedback in an effective performance management system.

System Foundation

Measurement, Analysis, and Knowledge Management (Category 4) are critical to the effective management of your organization and to a fact-based, knowledge-driven system for improving health care and operational performance.

Measurement, analysis, and knowledge management serve as a foundation for the performance management system.

6. BIBLIOGRAPHY

- Abbe-Decaroux, François. Economie de la Santé I. Lausanne, 2006.
- Abplanalp, Peter und Roman Lombriser. Strategisches Management. Zürich: Versus Verlag, 2005.
- Abrahamsen, Yngve, Jochen Hartwig und Bernd Schips. Empirische Analyse des Gesundheitssystems Schweiz. Zürich: Konjunkturforschungsstelle KOF der ETH Zürich, 2005.
- American Society for Quality. «Health Care Criteria for Performance Excellence.» United States Department of Commerce. Gaithersburg, MD: National Institute of Standards and Technology, 2008.
- Domenighetti, Gianfranco. Economie sanitaire, incertitude et induction de la demande par le medecin. Basel: Schweizerischer Arztverlag, 1995.
- Gastil, John. Political Communication and Deliberation. Thousand Oaks, CA: Sage Publications, 2008.
- Gené-Badia, Joan, et al. «The EFQM excellence model is useful for primary health care teams.» Oxford University Press (2001): 407-409.
- Jones, Gareth R. und Jennifer M. George. Contemporary Management. New York: McGraw-Hill, 2003.
- Kotler, Philip. Marketing Management. Upper Saddle River, NJ: Prentice Hall, 2003.
- Newhouse, Joseph P. Free for All. Cambridge, MA: Harvard University Press, 1993.
- Olmsted Teisberg, Elizabeth, Michael E. Porter und Gregory B. Brown. Making Competition in Health Care Work. Boston, MA: Harvard Business Review, 1994.
- Pitts, Robert A. und David Lei. Strategic Management. Mason, Ohio: Thomson, 2003.
- Porter, Michael E. Clusters and Competition. Boston, MA: Harvard Business School Press, 1999.
- . Competitive Advantage. New York: Free Press, 1985.
- . How Competitive Forces Shape Strategy. Boston, MA: Harvard Business Review, 1979.
- . How Information Gives You Competitive Advantage. Boston, MA: Harvard Business Review, 1985.
- . On Competition. Boston, MA: Harvard Business School Press, 1998.
- Porter, Michael E. und Elizabeth Olmsted Teisberg. Redefining Health Care. Boston, MA: Harvard Business School Press, 2006.
- Porter, Michael E. What is Strategy? Boston, MA: Harvard Business Review, 1996.
- Samuelson, Paul A. und William D. Nordhaus. Economics. New York: McGraw-Hill, 2001.
- Swiss Society for Health Policy. The Future Patient in Switzerland. Bern: SGGP, 2003.

6.1 PERSONAL INTERVIEWS

- Remy Rouge, Director Spital Belp, February 2008,
- Pierre Sterckx, Directeur adjoint, Hôpital Ophthalmique Jules Gonin, Lausanne
- Juerg Kern, Managing Director, Mediconsult AG, Roggwil
- Prof. Dr. Selim Orgül, Head of the Glaucoma Center, University Eye Clinic Basel, May 26, 2008
- E-Mails with Professor Elizabeth Olmsted Teisberg, and Jennifer F. Baron, assistant to Professor Michael E. Porter at Harvard Business School, Boston

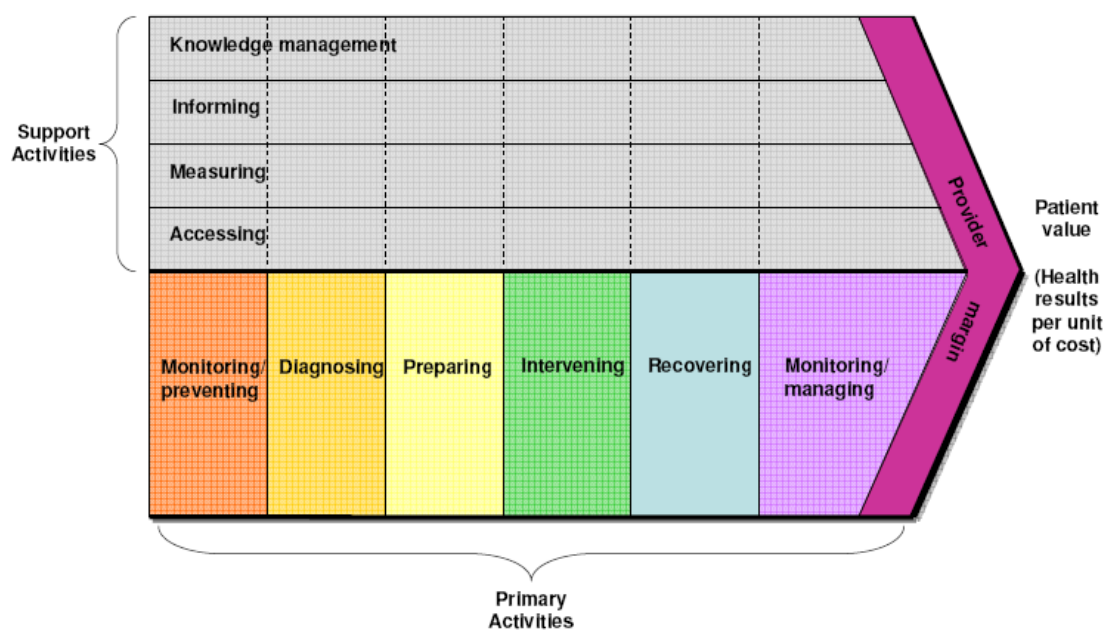
APPENDIX I: FACT SHEET

Care Delivery Value Chains for Ophthalmic Clinics

The Care Delivery Value Chain²⁴ is a new approach to analyze the **strategic positioning** of health care providers. Health care services are visualized along the full cycle of care: from monitoring/preventing, over diagnosing to intervening and recovering, and again to monitoring (those are the health care provider’s **primary activities**).

Support activities are indirectly adding value to the specific health care services. Support activities are for example: knowledge management, informing, measuring, and accessing.

The aim of every health care service should be to create **patient value**. Patient value is defined as health results per unit of cost. A possible health result could be 20/20 vision. Every health care provider should be committed to deliver the best possible patient value.



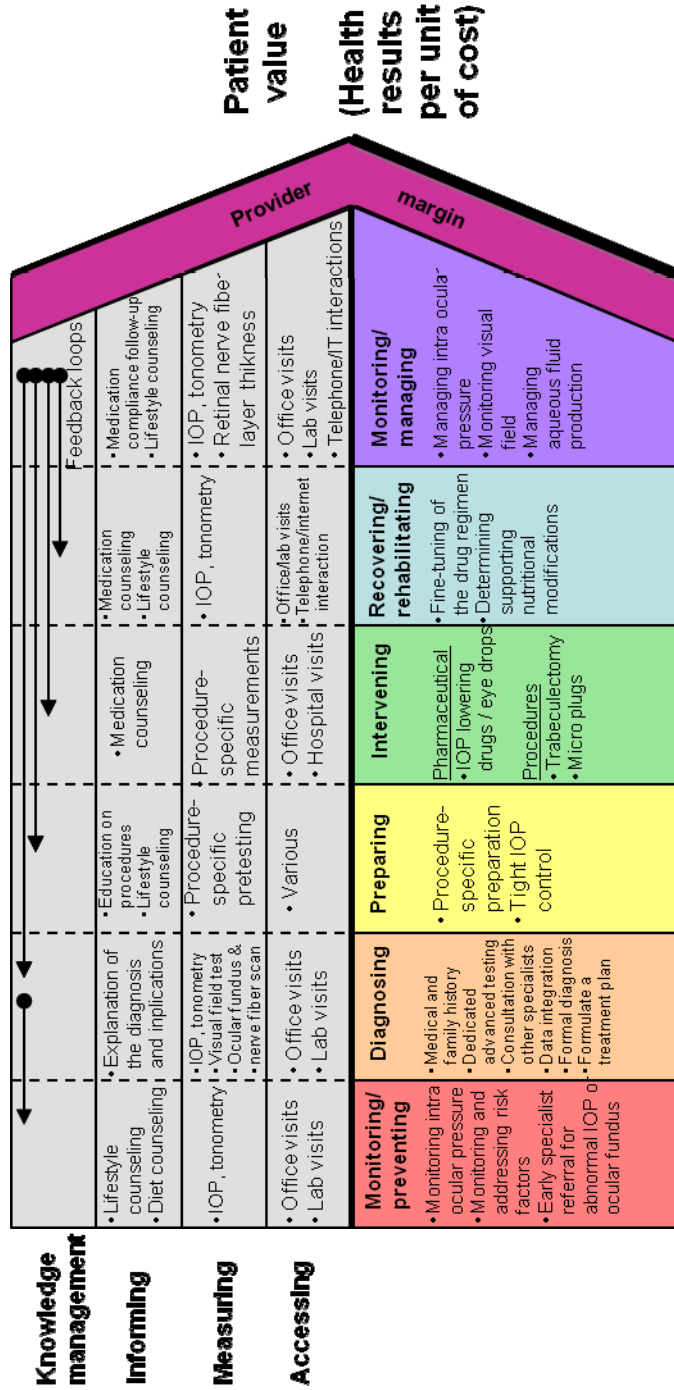
First, the primary and support activities of a defined health care service are analyzed in the own clinic. Are all activities aligned with patient value? Where and how can activities be optimized? (E.g. better feedback loops, coordination, collaborations, etc.?)

Then, the Care Delivery Value Chain of “competing” clinics can be elaborated. How do other eye clinics create patient value? How should the own clinic be positioned to face this competition?

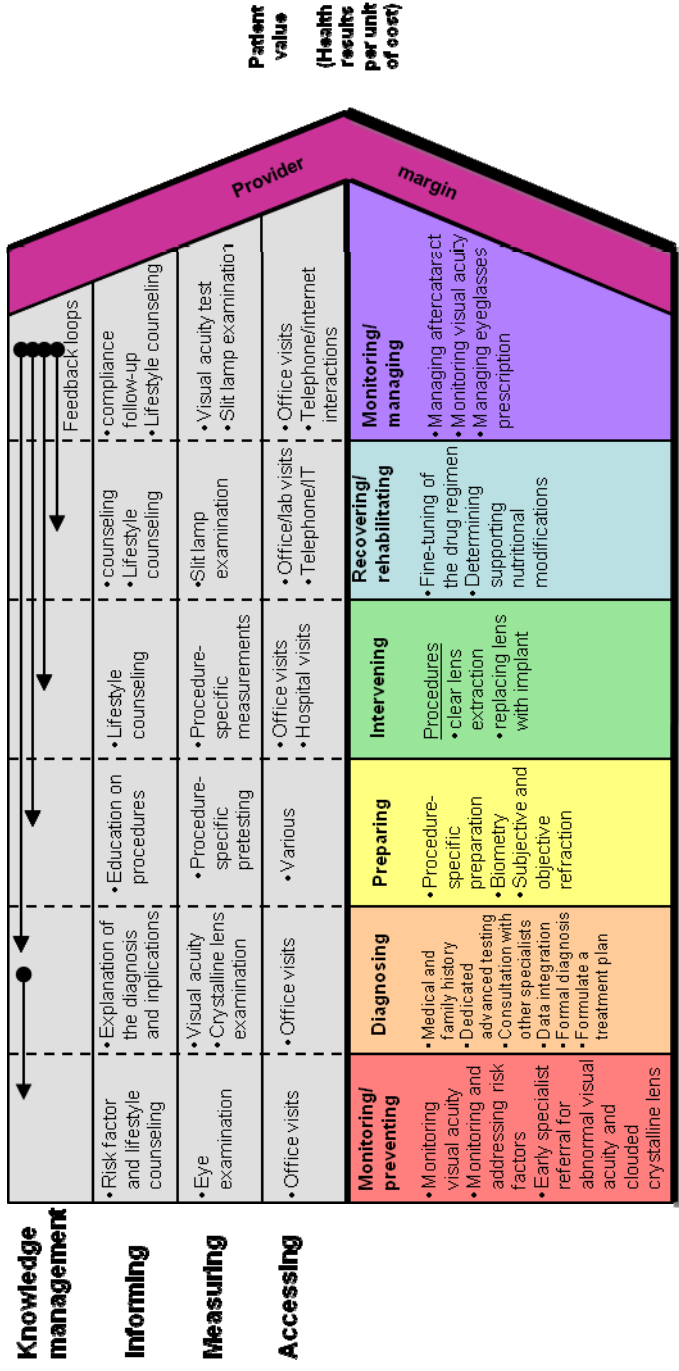
Note: Value-based competition should be a **positive sum game**, increasing overall patient value, and decrease costs. Finally, this patient value is what patients, health plans, and the government are willing to pay.

²⁴ Porter, Michael E. and Elizabeth Olmsted Teisberg. Redefining Health Care. Boston: Harvard Business School Press (2006).

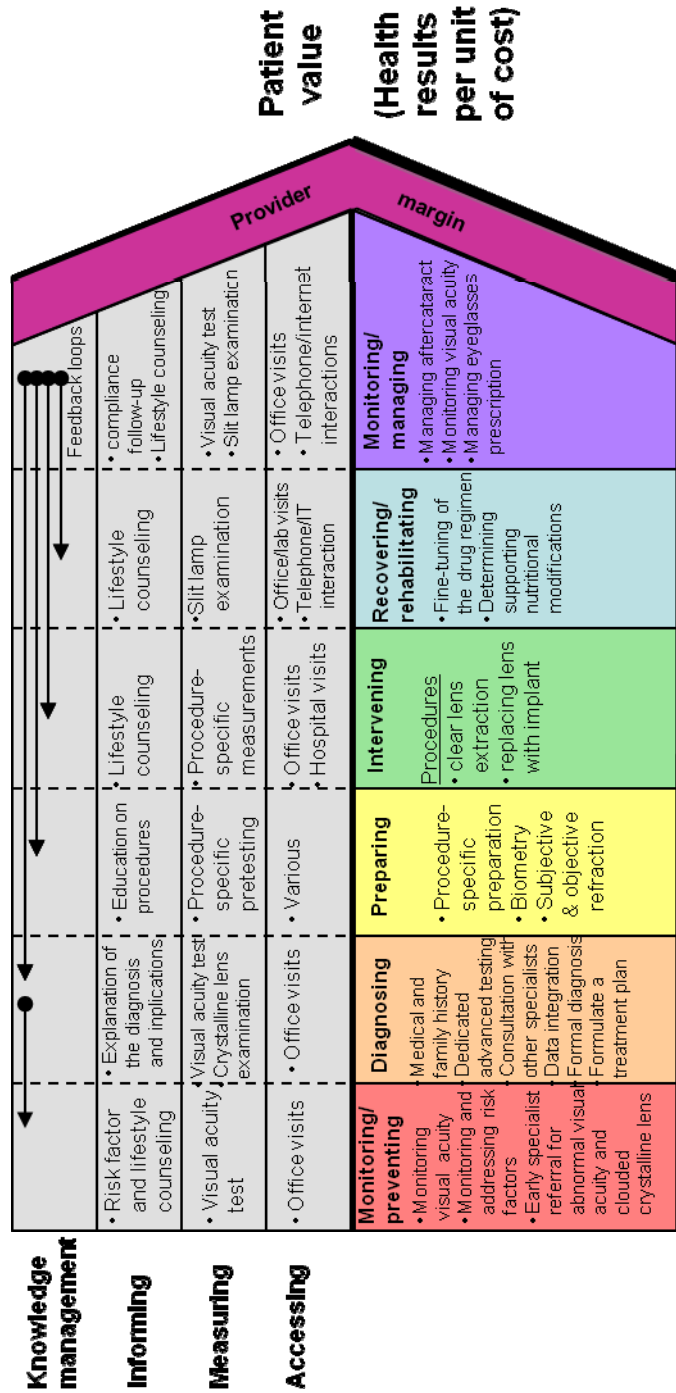
The Care Delivery Value Chain for Glaucoma



The Care Delivery Value Chain for Senile Cataract



Care Delivery Value Chain for Refractive Surgery



APPENDIX II: QUESTIONNAIRE

Care Delivery Value Chains for Ophthalmic Clinics

Goal of the questionnaire:

To collect opinions about the practicability of Care Delivery Value Chains for ophthalmic clinics.

Dear ophthalmologist,
dear hospital manager

Please have a look on the attached “Fact Sheet” and spontaneously fill-in the following questionnaire.
It would be great if you could send the questionnaire back until November 30, 2008.

Thank you very much!

Strategic Management

	I strongly agree	I agree	I disagree	I strongly disagree
I was already thinking about the strategic positioning of my eye clinic (the clinic I am frequently/always working).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Therefore, I was applying management models and concepts from the literature.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I already knew Porter’s „Value Chain“ concept before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To elaborate a strategic positioning concept for my eye clinic, it would be wise to work with a specialized consulting company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

Value Chain Analysis for Eye Clinics

	I strongly agree	I agree	I disagree	I strongly disagree
I think it makes sense to visualize the full cycle of care (from prevention to intervention and follow-up) and to think about how services could be optimized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While considering the Value Chain I can see the potential to optimize strategic collaborations with other clinics and referring doctors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
What is visualized in the Value Chain is basically what I have already been doing intuitively.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The economic way of defining patient value as health result per Swiss Franc is a good idea and is practicable. (Patient Value = Health results per units of cost)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

Competition in Health Care

	I strongly agree	I agree	I disagree	I strongly disagree
Enhanced Competition in Health Care motivates to become better and increases the quality of services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competition in Health Care is destructive and finally harms the patient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

After having heard about the Care Delivery Value Chain Analysis for ophthalmic clinics, now, would you consider to implement it in your clinic?	Yes <input type="radio"/>	No <input type="radio"/>
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This is an anonymous questionnaire. To enhance the analysis, please tick the following as applicable.

- I am working in a public clinic I am ophthalmologist
 I am working in a private clinic I am working in administration/hospital management

Canton of my clinic: _____

Please send a copy of the diploma thesis in PDF format to:

E-Mail: _____

Any comments and suggestions are welcome:

Thank you very much for your time to fill in this questionnaire.

Please return the questionnaire until **November 30, 2008** to:
Samuel Bühlmann, Effingerstrasse 3, 3011 Bern

APPENDIX III: PATIENT VALUE ASSESSMENT FOR PHYSICIANS AND PATIENTS

The methodology to deliberate patient value is derived from John Gastil’s book “Political Communication and Deliberation”²⁵, where he analyzes the impact of the media on the public opinion. Gastil takes a philosophical approach and assumes that average people have “enlightened understanding” of media-politics issues. As health care is also a highly political topic, it should also be interesting to use this method to confront issues from the health care professionals’ with the patients’ view. Moreover, this could be a workshop exercise for hospital managers and health care professionals.

The analytic and social processes for deliberation gives people the opportunity to evaluate the actions of health care professionals as well as their patients.

Analytic Process

	Health Care Professionals	Patients
Create a solid information base.	Present patients with a broad base of background information by reporting extensively on important issues and declare quality indicators.	Seek out opportunities to learn of others' experiences and relevant expert analysis.

	Health Care Professionals	Patients
Prioritize the key values at stake.	Explore the underlying concerns behind the outcome facts and events that define a medical intervention/ treatment.	Consider the diverse concerns underlying medical intervention/ treatment and how others prioritize them differently.

	Health Care Professionals	Patients
Identify a broad range of solutions.	Present the broadest possible range of solutions to patients’ problems.	Learn about how people like or unlike yourself think about addressing a health problem.

	Health Care Professionals	Patients
Weigh the pros, cons, and trade-offs among solutions.	Report different viewpoints but do more than juxtapose them; subject them to careful scrutiny.	Reassess your biases favoring or opposing different solutions by seeing how others weigh pros and cons.

²⁵ (Gastil 43)

	Health Care Professionals	Patients
Make the best decision possible.	Make recommendations but leave the decision to the patient.	Take responsibility for making up your own mind after listening to the advice of experts, health care professionals, and others.

Along with the analytic process, the social process involves more equal access and comprehension while considering other diverse points of view.

Social Process

	Health Care Professionals	Patients
Adequately distribute speaking opportunities.	Use diverse sourcing, medical literature, and listen to the patient.	Make time to listen to sources with views different from your own. Add your own voice when appropriate.

	Health Care Professionals	Patients
Ensure mutual comprehension.	Make diagnosis understandable for patients; information should be accessible to the patients.	When you cannot understand a diagnosis or an information, seek clarification from others.

	Health Care Professionals	Patients
Consider other ideas and experiences.	Take arguments from all perspectives seriously.	When hearing different views, avoid tuning out or ruminating on counterarguments before considering what is said.

	Health Care Professionals	Patients
Respect other participants.	Model respect for different views; treat patients with respect by making information serious but engaging	Give the benefit of the doubt to diagnosis or information but demand better behavior from those who violate your trust