

Chapter 9

Breakthrough: Implementing Differentiation in Specialized Healthcare

How Can Schedulable and Academic Healthcare Be Organized Best in the Second and Third Line?

Besides the primary care and chronic diseases where the proximity to the patient is leading there is also specialized Healthcare where concentration of treatments helps to improve health and/or lowers costs. This concerns schedulable treatments where economies of scale can be realized in terms of quality and/or price. Further, there is and always will be a need for a very select number of top academic institutes. If it involves specific diagnoses and treatments which can be provided stand-alone this can be done in specialized hospitals to avoid complexity and overhead. If it concerns integrated treatments in which different medical conditions are involved it can require broad general or academic hospitals.

- *Narayana Hrudayalaya is a brilliant example of the sort of hospitals which arise in India to provide excellent quality of care for 5% of the costs in the west by optimal use of scarce resources.*
- *ThedaCare is a showcase of a hospital which uses the lean way of working to improve care continuously for patients in close cooperation with all its employees.*
- *Princess Margaret Cancer Centre shows the result which can be made with concentrating expertise while overcoming the challenges this poses with the large distances in Canada.*
- *Mayo Clinic shows what you can offer to the world and patients if you skip all barriers to do the right thing and simply concentrate of giving patients the best care you can envision.*

The last breakthrough to look at is specialized healthcare. The schedulable part of this can be optimized with the “process” serving as a guiding principle to optimize in the organization. In addition, this relates to highly specialized care that really should be bundled based on “knowledge”. In countries where the healthcare

infrastructure has recently been built up or the population density is very low, there has often traditionally been a lot of concentration based on process and/or knowledge. In particular the challenge is how to go about reaching people in cooperation with primary healthcare supported by technology such as telemedicine. That is a whole lot different than the situation in Europe and both coasts of the continental USA. In these areas the current healthcare infrastructure can only be partially understood based on the current demand for healthcare services. Such demand has also, historically speaking, grown in a period when people had to travel long distances on foot, by horse or by carriage and certainly not everyone had a car. That limited people's range of operation. In the 1960s there was still little in the way of specialization. The lion's share of hospital work was done by the surgeon and the internist with nurses. In that regard, hospitals were very similar but this was no problem since they primarily had a regional function.¹ In other words, most patients could rightfully talk about "my" or "our" hospital in the neighborhood. Over the past years, conscious or unconscious decisions have been made regarding differentiation and focus on the specializations in which healthcare providers want to be the best. This still concerns an organic process and it is not even close to being completed. In the upcoming decade many hospitals in Western countries will make a conscious decision for the business model by which they want to stand out. This is also needed to create a clear position with added value in networks in which treatment paths are conducted in cooperation between different healthcare providers. Some of the providers will merge with another entity or disappear entirely. While the phasing out of capacity is needed, it is also a difficult and painful process during which people must subordinate their own interests and grant each other the necessary slack to that end. This goal will, for instance, often demand mergers, alliances, and acquisitions before duties are reallocated. The parties concerned will then be able to continue working in new entities that are partially or even fully independent. This development is already visible in various countries in the West.

A rough picture of the possible healthcare infrastructure of the future can be outlined for countries that are currently setting up a healthcare infrastructure or where the existing infrastructure is being adapted in order to make this secure for the future.² In general segmentation terms, a distinction can be made in the positioning of healthcare providers based on the extent of specialization versus breadth on the one hand and based on the guiding principle in organizing (nearby, process or expertise) on the other.

As outlined in the previous chapters, in the future part of the care will be provided at home and by people themselves. In the physical healthcare infrastructure, there is primary care and cure that can best be organized near the patient with the

¹ AI (1981).

² See for instance: Porter and Teisberg (2006), Bohmer (2009) and World Economic Forum and McKinsey (2013).

personal approach ‘nearby’ serving as the guiding principle to optimize in organizing healthcare. This typically plays a role in primary healthcare that is not particularly complex. This for instance concerns one or more doctors and primary caregivers that share a building. In addition, there also seems to be more space for specialized diagnosis centers near the primary care for simple tests and scans that are carried out often. In terms of organizational characteristics, these combine customer-oriented retail services for primary care with elements of more streamlined schedulable care. In addition, there remains a need for small hospitals with a more local function for acute healthcare with a maximum of traveling distances and for treatments that often occur such as for broken bones and pregnancies. All these forms of physical healthcare seem to primarily benefit from organization based on the personal approach ‘nearby’, otherwise the danger of overhead and bureaucracy is greater than the potential for synergy. Different types of organizations that share this basis of being organized around the customer are UCLA’s Value Quotient, ParkinsonNet, Laastari, Patrick Lund, and Ryhov.

Aside from the movement to bring healthcare closer to the patient, there is also care that benefits from being bundled and concentrated in hospitals with a greater or much greater service area. In that regard there are primarily two arguments that can be made in favor of bundling. Firstly, it is possible that things can be done much more efficiently and with fewer errors thanks to economies of scale with process optimization as the guiding principles in organization. Secondly, it is also possible that things will truly become better if all expertise is bundled at one location with knowledge serving as the guiding principle in organization.³ In both the process optimization and the bundling of knowledge, it is possible to do so with the focus on one specific treatment or with the broader scope on various treatments. On this basis, we can look for inspiration at four archetypes of business models for larger hospitals. It should be noted in that regard that some roles undermine each other if they are integrated in a single organization, but that a number can be combined or at least share the same location. In this way it seems entirely logical that a broad-based hospital with streamlined processes or rather with bundled expertise also fulfills the role of regional hospital within its own environment. Further, it is useful to imagine that a broad-based hospital with streamlined processes also has a specific treatment unit for one schedulable, standardized treatment which is organized and managed as a relatively separate entity. A top academic club will not only excel in a specific field, but generally also has an educational goal, which means that relatively easy treatments must also be carried out there. It is also possible that it has a specific field in which it is a leader both nationally and internationally.

³For a description of a possible healthcare infrastructure of the future, see for instance: Porter and Teisberg (2006), de Lugt et al. (2013) and Idenburg and Van Schaik (2013).

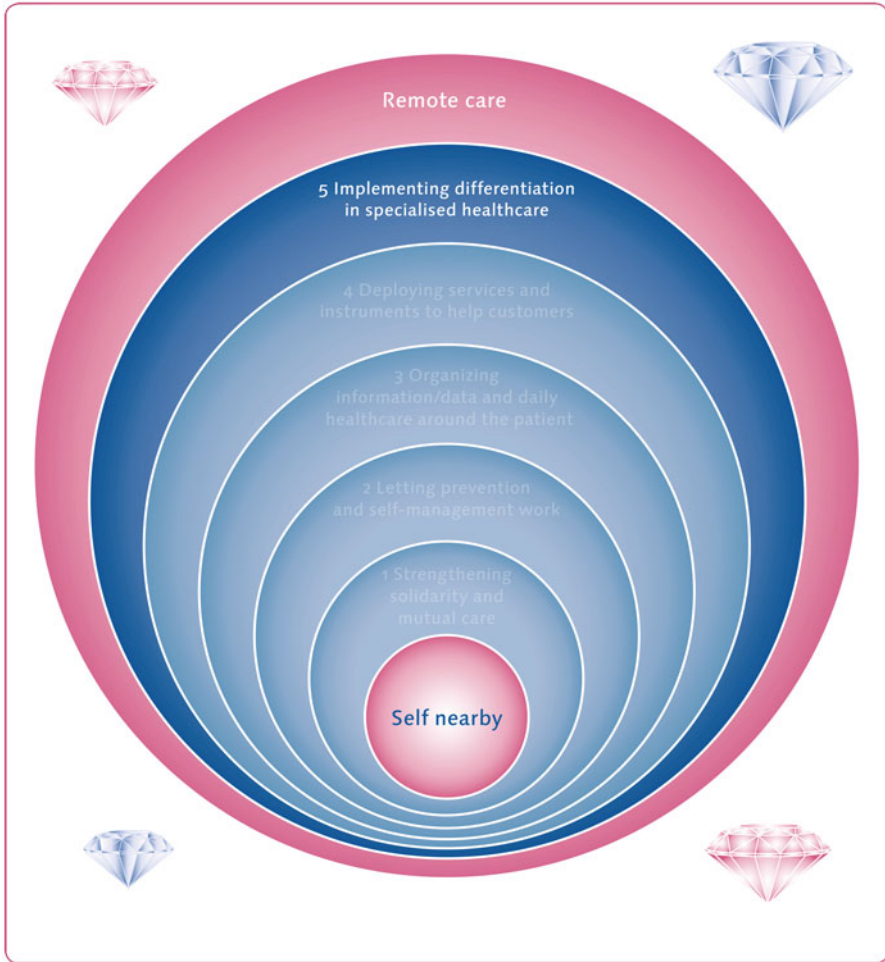


Figure 9.0.1 Breakthrough: Implementing differentiation in specialised healthcare

Business Models Like Narayana Hrudayalaya Truly specialized work within healthcare is shifting to diagnosis and more complex disorders. Where traditionally almost all healthcare treatments required broad expertise, they themselves are increasingly becoming relatively standardized processes.⁴ These can be described and improved by endless repetition and refinement, i.e., by way of specialization. This applies to simple surgeries, such as laser eye procedures and hip and knee surgeries, but also to complex procedures, such as open-heart surgery. Schedulable treatments where economies of scale can be realized in terms of quality and/or

⁴Christensen et al. (2009).

price will become increasingly concentrated. This bundling increases the value and quality of the treatment due to the fact that expertise and experience increase, while at the same time it reduces the costs as the process and the surgery become even more streamlined.⁵ Good examples of this are provided by hospitals that focus on the customer and the market to specialize in one treatment as a focused factory,⁶ also known as the value-added process business.⁷ The most pioneering examples of these focused factories are currently found in India. This is where hospitals can be found that realize volumes comparable with the entire number of treatments in medium-sized European countries or several states in America. Consequently, they also deliver comparably high levels of quality but for merely 5–15% of the costs. The example under discussion here is the Narayana Hrudayalaya Cardiac Hospital. This hospital has been in existence since 2001. It has developed into a hospital that carries out most complex heart operations in the world at a fraction of the cost in Western countries. It has the capacity to carry out 50 treatments per day during peak times. It has adapted innovatively in a country where the demand for healthcare services is extremely greater than the volume of healthcare services provided. It has done so by optimizing its use of available capacity in terms of funds, resources and people. Rich people pay a bit more, as a result of which poor people can also be helped. At the same time the hospital is very profitable, which is necessary to finance its further growth. Narayana Hrudayalaya is, however, no exception; another famous example is Aravind Eye Hospital.⁸ The inspiration for standardizing eye operations is the process for cooking hamburgers at McDonald's. The success percentages rival and beat top Western hospitals, while its costs—at USD 35–41 per treatment (EUR 31–37)—are merely around 5%. Focused factories are, however, not a new development. The classic example is Shouldice, which specializes in hernia operations. Since the 1980s, this hospital has been reviewed multiple times and it is in the top five of the best-sold cases of Harvard.⁹ Because this is a historical landmark and example, it is described separately at the end of this section. There are many more examples of this type of focused factory. In the field of hernia operations in the Netherlands, for instance, there is a specialized ward in the Diaconessenhuis hospital and in the field of hand and wrist surgery a good example is ExpertClinic. In Finland, the Coxa Hospital performs many relatively simple operations, such as hip and knee surgery. This also holds true for more complex operations: Geisinger concentrates on cardiology, whereas Cancer Treatment Centers of America specializes in oncology, but then across the board, providing many supplemental and alternative treatments.

⁵For descriptions of the concentration and optimization of hospitals, see for instance: Porter and Teisberg (2006), Bohmer (2009) and Christensen et al. (2009).

⁶See for instance: Herzlinger (1994, 1996).

⁷Christensen et al. (2009).

⁸Kemperman et al. (2013).

⁹See Heskett (2003) and Heskett and Hallowell (2005), Heskett et al. (1997), Herzlinger (1994, 1996) and Khandelwal (2009).

Business Models Like ThedaCare Many patients require more care than just one specific treatment. While it is often not possible to have all the treatments in a regional hospital, this does not mean that it requires an organization with a range of academic disciplines. In that light, there also seems to be room in the long term for a number of broad-based hospitals that organize and coordinate processes efficiently and in a customer-oriented manner. This actually relates to the subgroup of “regular” patients for whom there is no very specific, defined surgery. It concerns, for instance, people with various disorders or a medical history or age for whom there is a major risk that different treatments may be required due to complications. This demands general hospitals that optimize their processes within and between units. Perhaps even more than with the solution shops that optimize their processes in treatment centers, the best hospitals in this category work extensively in accordance with the Lean philosophy, as it has become known at Toyota. The example studied to that end is ThedaCare. This is a trend-setting example of a broad-based hospital that continuously improves itself on the basis of customer focus and leadership. Examples of comparative broad-based hospitals with streamlined collaboration are Virginia Mason and the University of Pittsburgh Medical Centre.

Business Models Like Princess Margaret Cancer Centre There is integrated care and primary retail solutions organized around the patient, acute and simple care in local care institutions, and standardized, concentrated care in efficient hospitals. Further, there will always be a need for top university institutes. In that regard, knowledge is brought together for the purpose of jointly and truly expanding ideas, conducting research and carrying out new, complex treatments. This concerns in particular those areas that are truly knowledge-intensive, i.e., where the best specialists are needed. The people that work there are often very motivated and driven by the content and prepared to work and learn hard. At the same time, these are not the most efficient organizations. Top university institutes also need leeway and room to experiment and acquire in-depth information. It can concern broad-based teaching hospitals, as well as a disorder that is, relatively speaking, a stand-alone case and regarding which there is room for a specific, first-rate expertise center. This can also be called a “solution shop.”¹⁰ The example that has been studied here is that of Princess Margaret Cancer Centre, a leading clinical hospital in Canada focused on oncological disorders. Located in the middle of universities and other knowledge-intensive institutes, the organization brings science and practice under one roof. Doctors accomplish top results in both fields by coming alongside patients during their treatments and supporting them in a coaching role in order to take up the fight against cancer together. Another example is the National Jewish Medical & Research Centre in Denver, Colorado, which focuses primarily on diagnoses and is a true expertise center when it comes to asthma.

¹⁰Christensen et al. (2009).

Business Models Like Mayo Clinic Aside from the specialized and highly specialized top institutes, there is a need for a very select number of top, broad-based academic hospitals. This concerns in particular the truly knowledge-intensive areas that require a multidisciplinary approach. Above all, where it concerns complicated combinations of symptoms, a collection of academic expertise is ideal and often sorely needed. It relates to, for instance, the diagnosis of exotic disorders whereby it is unclear as to what that patient has. In that case, we can think of the patients that spend a year being cared for by various healthcare professionals and constantly trying different treatments without this resulting in a clear analysis of the disorder and the corresponding treatment. It can also concern various surgeries and unexpected complications that involve different areas of expertise. That demands that the services of the best specialists in the country or even in the world are bundled into the relevant fields of specialization. These are locations where research and practice are combined, and are producing state-of-the-art innovation. The best known example of a hospital that provides this is Mayo Clinic. Within Mayo Clinic, multidisciplinary teams work at the top level, fully focused on making the patient better. Within such broad-based top academic institutes, these are in fact solution shops where broad-based expertise is organized around a specific organ like the heart. Another example of such an approach is Cleveland Clinic, which employs solution shops for neurology and cardiology.

The Brilliant Business Model of Shouldice¹¹

Experience is irreplaceable

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Shouldice is famous worldwide. It is one of the bestselling Harvard business cases of all time and currently used as case material in over 500 MBA programs. This case was described for the first time by Heskett in 1983 and has since been enriched and spread around the world. When we look at it today, the hospital is still faithful to its roots, principles and methods of the past decennia. It is still a world-class example from the perspective of customer excellence and journeys, and social design. It scores remarkably high in relation to customer satisfaction and NPS. From a purely medical perspective, the “Shouldice method” is no longer the best practice and standard in the world. Additionally, growth is limited as a private hospital with a fixed number of beds in the public system of Canada. Since Shouldice is rather well known, we chose to discuss the case of NH Cardiac Hospital as an example of a focused factory in more detail. But we naturally could not overlook the legendary and inspiring example of Shouldice which has been and is an example for so many hospitals and service providers in other industries. Why did Shouldice become so famous?

¹¹ See for the case for instance: Heskett (2003), Heskett and Hallowell (2005), Heskett et al. (1997), Herzlinger (1994, 1996), Khandelwal (2009) and Korten (2008). See for the medical status for instance the European guidelines for treatment of inguinal hernias. This case is also described as a full case following the conceptual framework of Brilliant Business models in Kemperman et al. (2014).

The roots of Shouldice can be traced back to the Second World War. At that time, Dr. Edward Earle Shouldice, an army major, notices that many volunteers cannot join the army because of their hernias. He develops a fast new treatment that enables 70 men to enlist. After the war, 200 civilians contact him seeking treatment and he opens the Shouldice hospital, which focuses exclusively on hernia treatments for people who are otherwise healthy.

The Cornerstone of Shouldice: There Is No Substitute for Experience From the outset, Shouldice has focused on providing the perfect hernia treatment: fast, efficient and excellent. This has been optimized and optimized by the experience of doctors and the experience of patients. The Shouldice treatment was unique in the way it integrated the perspective, behavior and responsibilities of the customer within the process from the very beginning. The standardization also implies that Shouldice focuses purely on healthy patients. It is all about standardization towards perfection and empowerment of the customer as a quest and not as a patient. The result for the customer is a rapid, healthy recovery in a beautiful environment that looks like a hotel, but is actually a brilliant social design focused on the recovery of hernia patients.

The Business Model: Walking Through the Shouldice Experience Shouldice focuses on customers who only have a hernia (more specifically, abdominal wall fractures such as inguinal hernia, umbilical hernia repairs and femoral hernias). Someone who is overweight is not admitted until the excess weight has been lost. In the case of multiple diseases, people are redirected to a general hospital more able to deal with any complications. Due to its extreme focus, Shouldice does not have any direct competitors and has been able to treat more than 350,000 patients since its establishment. Its value for customer is the high success rates thanks to the combination of experience and standardization, the competitive price and the unique experience of the treatment itself which gives a feeling of comfort and self-control. People take control of their treatment instead of the treatment taking control of them. The delivery process is unique and filled with small highly intelligent details that stimulate self-control and recovery. When people arrive, they eat lunch together with people who just had surgery the day before and can share their experiences. Newly admitted patients see people playing pool who had a hernia the day before. People are asked to climb off the operating table themselves directly after surgery. There are no TVs in the rooms to stimulate people to leave their rooms (a trick which was of course easier before the mobile phone). The steps of the stairs are somewhat lower to give you the impression you can climb them in no time. The garden has different heights to encourage exercise. In short, this is one major customer journey to walk through and recover!

The Results: The Customer Attraction of Customers The result of the Shouldice treatment is that people stimulate themselves and each other to work on their own recovery, which increases the success rate. The actual loyalty rate is very low since people are not supposed to require another treatment, but they do return, for the reunions which used to be organized by Shouldice. People also enjoy sharing their

experiences. Shouldice has many stories to offer in this regard and therefore shares these as well, with or without social media and not only in their private networks but also in cases and books such as these. That constantly attracts many new customers. The doctors within the process focus on the hospital: they are not big innovators but specialists who enjoy optimizing one treatment and taking good care of patients in a friendly environment. Shares in the hospital are owned by two families, including the Shouldice descendants. The current turnover is CAD 20 million (EUR 13.8) and the family business has always provided a regular stream of income and profit based on the predictability of the number of treatments and costs. One of the difficulties faced by this private hospital is the fact that it exists within a public Canadian system, which limits expansion possibilities. The families are looking for international partners to operate abroad but this has proven difficult up until now due to permits. Even a Shouldice needs the support of society to flourish.

The Brilliant Lessons of Shouldice Shouldice has always been a leading example of a focused factory model. Nowadays there are also signs of the Phase 4 risks in which the challenge is to continue renewing while maintaining the core. This is an additional challenge since the business model is about polishing the details and deliberately avoiding major changes. How do you deal with the possibility of day treatments and recovery at home when your results in relation to self-management and additional fees are based on overnight stays in your recovery hotel? What always was and still is fascinating about Shouldice is the way in which it has designed the treatment as a social process. Theories on self-management and the personal responsibility of patients in treatment processes have been implemented in tangible and visible ways at Shouldice. Doing so not only required a medical understanding of the body, but also profound and practical human insights. The experience of Shouldice is not only valuable for doctors and patients, but for all people who want to help people improve their health.

9.1 Narayana Hrudayalaya

So much cardiology with scarce resources

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Prelude *You don't expect to find cardiac care combined with a mass-market approach. The first time I heard about it I was surprised. The idea of exploiting economies of scale in the delivery of extremely complex surgery was new to me. But the Narayana Hrudayalaya Cardiac Hospital demonstrates the feasibility and advantages of this idea. It immediately made me think of my nephew, who was born with a hole in the dividing wall between the two chambers of his heart. By the time he was 16 he had undergone several heart operations. His life was one long round of trips to see the best cardiac surgeons in the Netherlands. There were always concerns for his family and the doctors who treated him, because it was possible that simply growing up would affect his heart function. These days my nephew leads a normal life, but would this be the case if he had been born into different circumstances, in India for example? What prospects would children such as my nephew face if the NH Cardiac Hospital did not exist? The hospital aims to provide high-quality care that is both affordable and accessible. Is the business model implemented by NH Cardiac Hospital capable of improving cardiac care worldwide with the quality of care required by people such as my nephew? After experiencing the social problems associated with healthcare during a stay in India, I became even more interested to find out how the business model adopted by this hospital is endeavoring to meet the high demand for care in India, starting with the demand for cardiac care. All of this led me to study the extremely inspiring business model pursued by the NH Cardiac Hospital, which is the subject of this case.*

Introduction Imagine a hospital in a developing country—a country with extreme differences between social classes and extreme differences in income. A hospital where everyone is welcome, irrespective of their social class, status or financial situation. A hospital precisely like this was set up by the highly praised and inspir-

ing Dr. Shetty, who is also its director. He has made cardiac care, which is usually costly, both affordable and accessible for many people in India and from other countries. Dr. Shetty wants to provide everyone in the world with affordable high-quality care and is working hard to achieve his dream. It is this dream that led to the establishment of the NH Cardiac Hospital in Bangalore in India. With 1000 beds, 24 operating theaters and an infrastructure that enables 50 major heart surgery operations daily, it is one of the world's largest cardiac hospitals.¹² Patients come here from more than 73 countries, the NH Cardiac Hospital performs the largest number of pediatric heart surgery operations worldwide and its doctors are able to implant the latest generation of artificial hearts. These impressive results are clearly underpinned by an inspiring business model.

Dr. Shetty is a cardiac surgeon who has created a revolution in cardiac care by offering high quality medical care in India at prices that are between 5% and 10% of those charged in America. Dr. Shetty's ultimate dream is to resolve the health problems of poor people throughout the world for just one dollar per person per day. This is a dream that many people will share with him. Yet the way that Dr. Shetty is seeking to achieve this dream is making an impression on both medical specialists and entrepreneurs. His business model enables the delivery of dangerous and high-risk surgery at progressively lower costs thanks to economies of scale. The way in which this is being accomplished is unique and the fact that it works is confirmed by the results. The nature of the business model means that large-scale operation is essential: lower costs lead to lower prices, which lead to higher volumes. These higher volumes then make it possible to keep costs low. The model seems to work extremely well in the Indian cardiac care market, where the demand for care exceeds the scarce supply. The NH Cardiac Hospital achieves better success rates (fewer complications and a lower mortality rate during the first 30 days after surgery) compared to similar hospitals in the USA.¹³ In addition, the NH group has a higher after-tax profit margin (7.7%) than American hospitals (6.9%).¹⁴ The results speak for themselves, but Dr. Shetty does not intend to stop here. With the help of his business model he is determined to change healthcare for the better throughout the world.

9.1.1 The Cornerstone: Why Bigger Is Better

The development of a new economic model in healthcare was prompted by cardiac care that is usually expensive. The model improves the accessibility of care for poor Indians, and ultimately enhances care throughout the world. To understand the need for new solutions it is good to take a look on the big challenges in India.

¹²Narayanahospitals.com and Anand (2009).

¹³Kemperman, Geelhoed & op 't Hoog (2013).

¹⁴Kothandaraman and Mookerjee (2007). Used more frequently in this case.

Healthcare in India is in scarce supply, especially in the countryside with cases where there is only one doctor available for around 200,000 people. On average, India has less than one doctor per 1000 people while in the USA this is 2.56 doctors per 1000 people. According to Ajay Dhankar from McKinsey Healthcare, healthcare in India appears hopeless in view of the sheer level of poverty and a government that does not fund basic care (India spent a mere 1 % of GDP in 2002/2003 on public healthcare). It is estimated that only 14 % of Indians have health insurance and can pay for treatment or borrow money to do so. More and more treatment is also being received by medical tourists: an estimated 150,000 foreign patients were treated in 2005. India has approximately 170 medical training programs, but 18,000 graduate doctors could not fill the gap of 45,000 doctors required in 2012. FICC/Ernst & Young estimates an increase of one million beds that were required for hospital beds and surgical treatment in 2012. That is more than the Indian healthcare sector could and can cope with. Cardiovascular disease is the number one cause of deaths in India. Research shows that the Indian subcontinent accounts for 45 % of the global problem of cardiovascular disease. The average age at which a heart attack occurs there is 45, compared to 65 in the West. Of the estimated 2.4 million operations required in 2004, only 60,000 were performed that year.

India evidently needs a solution to the high demand for cardiovascular care. The business model used by NH Cardiac Hospital provides a response to this and facilitates the organization of care. The brand essence can be described as: “be the best hospital in the provision of affordable quality care for all, starting with cardiac care.” The focus is on affordable quality care for everyone. Becoming the best hospital through this business model goes hand in hand with the realization of the specified goals.

Dr. Devi Prahad Shetty was born in Karnataka, India on 8 May 1953. Upon obtaining his graduate degree in medicine he went on to specialize in general surgery. After completing his studies and working in London he returned to India and cofounded the Asia Heart Foundation in Calcutta. During that period he was also involved in the construction of several large cardiac hospitals. In 1984, Dr. Shetty met Mother Theresa in Calcutta when treating her following a heart attack. Afterwards Mother Theresa accompanied Dr. Shetty on his hospital rounds for children with heart problems. She noticed the good work he did and told him that God had sent him to this world to help these children. That changed his outlook on his life and he started following her vision. To this day, he is dedicated to helping the less privileged. He opened the MHF hospital in Bangalore in 1997 and returned to this city in 2000, making it the centre of the NH Group. Narayana Hrudayalaya literally means “God’s compassionate home.” The NH Group comprises several healthcare institutions situated in different areas. Its flagship institution, the NH Cardiac Hospital, founded in 2001 and located in Bangalore, is the best-known example of Dr. Shetty’s successful business model. Dr. Shetty’s perseverance in attaining his goal to make advanced healthcare available to large groups of people must have compelled him to only take those decisions that support that higher goal. Certainly in a developing country such as India.

The moment Dr. Shetty established the NH Cardiac Hospital, he did so using a clear vision and promise to serve people and society. The hospital promised to provide affordable and accessible cardiac care for everyone, regardless of their caste, class, religion, and whether or not they were able to pay. The hospital would accept everyone in need of treatment and always uphold this promise. Today the group's staff are still inspired by Dr. Shetty's dream to ultimately heal the poor of the world for merely one dollar a day per person. And even if this dream is difficult to fulfill, it is still the audacious goal that drives the organization every day. Dr. Shetty has expressed a desire to set up "Health Cities" in all Indian states in the future, and to be represented in every emerging economy in the world without increasing healthcare costs. To get closer to the audacious goal, he strives to provide holistic and on-time care, expand knowledge and technology continuously, improve customer relations, and offer patients an enriching healthcare experience.

The NH Cardiac Hospital uses guiding values to successfully attain the specified goals. These values are: accessibility, affordability, high quality and a service-oriented approach, all of which are geared to serving society. Accessibility in India is still low due to the financial and infrastructural limitations affecting the majority of poor people. To make cardiac care accessible and affordable, it is important that people who need treatment actually also receive it. At the same time this requires a commercial solution and not a nonprofit one, according to Dr. Shetty who states that "Charity is not scalable". Expansion can only be realized by earning money which can be invested to finance the growth. The hospital devotes considerable energy to helping the less privileged, and the service-oriented approach can be described as the brand and core value. It seems logical for service to be the focal point within healthcare given the numerous contact moments with patients. The hospital also focuses on improving systems continuously in order to optimize service. Up until now, the values are clearly reflected in brand proof and core qualities.

The NH Cardiac Hospital must implement its core qualities in full to attain maximum accessibility, affordability, high quality, and excellent service. Efficiency is a key component in day-to-day work: specialization and standardization help bring the values to life. Innovation is also a core quality, in addition to specialist training and a leading position in the world of suppliers and partnerships. The economies of scale that NH achieves in the world of high-risk operations allow everyone in need of cardiac care to receive it at a lower cost compared to practically all similar hospitals. There are more factors that demonstrate the success of the business model: quality proof can be found, for example, in lower mortality rates in comparison with other hospitals, including the best in the US. Accessibility is proven by extensive NH networks throughout India and affordability because patients are always assisted, regardless of their financial position. People know beforehand exactly how much their treatment will cost. The NH Cardiac Hospital performs over 20 major operations daily and has a capacity for fifty, making it the largest pediatric heart hospital in the world. In addition, the overall approach taken by the NH Cardiac Hospital makes it a pioneer in a number of specific heart operations.

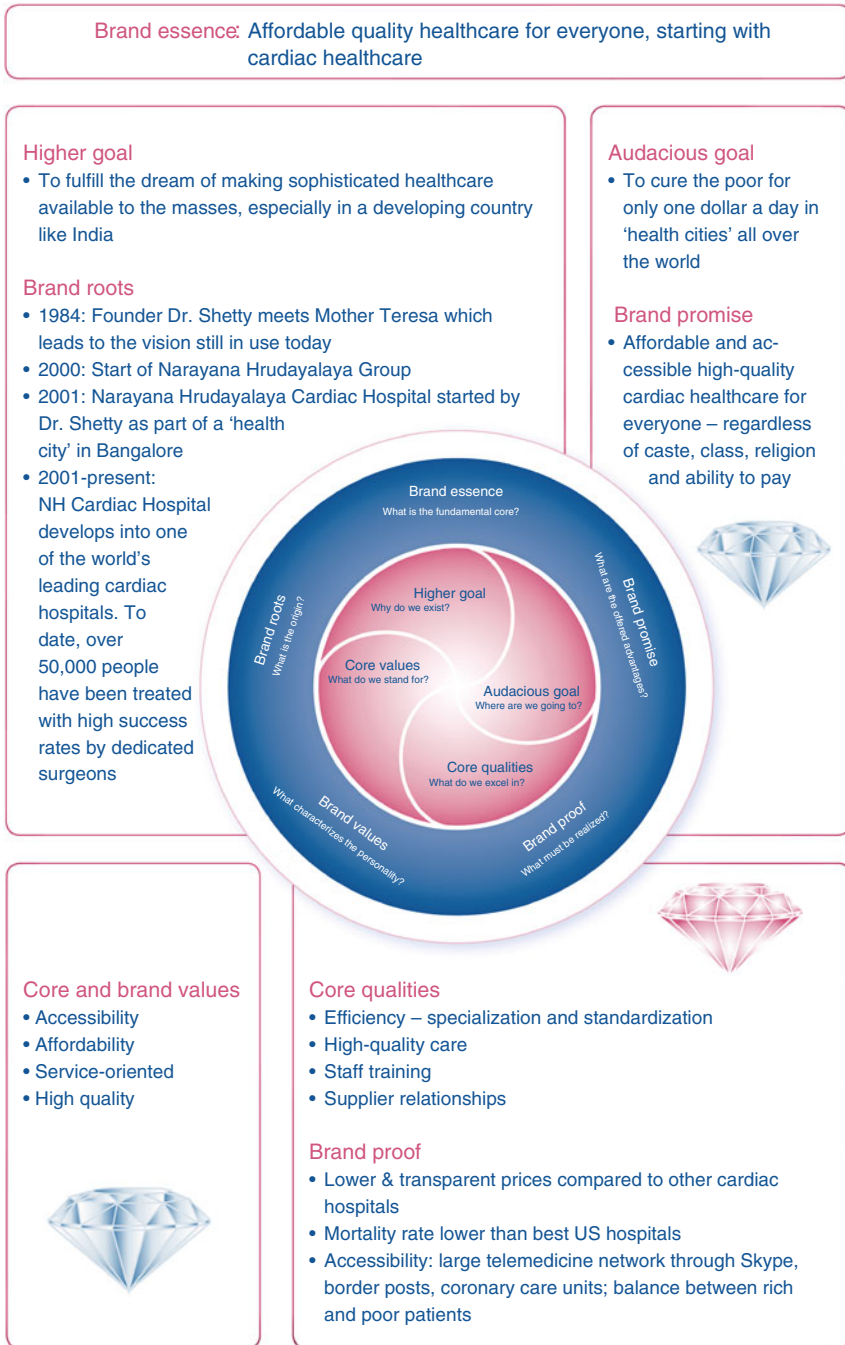


Figure 9.1.1 Vision and Positioning of Narayana Hrudayalaya Cardiac Hospital

9.1.2 The Business Model: When Bigger Is Better—Economies of Scale in Healthcare

To understand the business model of the NH Cardiac Hospital, it is important to realize that the things which are scarce in India differ from those in the Western world. To start with, the demand for healthcare greatly exceeds the supply. Devices, medicine and operating equipment are far more expensive and resources lacking in these areas are a reason why people cannot be treated and die. The impact of this is visible in the relative number of by-pass operations compared to the placement of stents. In the Western world, a ratio of four stents to one by-pass is pretty usual since by-pass operations are considered to be more complicated and far more expensive. In India, the ratio is the other way round: stents make the operation expensive, success rates of by-pass operations are the same and reduce the number of people who have to return within a few years.

Volume and scale are the driving forces behind the business model. They are fundamental to the way in which the NH Cardiac Hospital performs. Comparisons are often made between the NH Cardiac Hospital and Henry Ford's mass-manufacturing approach in the previous century, as well as influences from "Taylorism" that can be found in the daily approach to work and the vision. The core of the business model can be visualized as a rising spiral in which low costs, low prices and high volumes reinforce one another.

The way in which NH Cardiac Hospital improves its business model in practice is more characteristic of continuous and organic learning than of a mathematical scientific design. Dr. Shetty is also a thrifty man who hates to spend too much money. He is constantly looking for new and creative ways to save money and makes this a sport. The use of standardization, economies of scale, process design and purchasing benefits creates a continuous process in which lower costs result in lower prices that in turn provide higher volumes. It is important that this always goes hand in hand with the attainment of a higher quality of care. The hospital has scarce (financial) resources for the use of high-tech equipment and medicines to meet the excessive demand for care. This demand cannot be met at the current cost level. Such a situation stimulates a pioneering spirit and innovative thinking. The business model therefore appears to be the result of the driving force and need to find new solutions to a changing environment. It would seem logical to expect an end to the upward spiral somewhere on the basis of scale, but this does not appear to have been reached yet. The model has, in the meantime, proven itself within healthcare. In the future it can also be of greater assistance in finding a solution to the increasing demand for healthcare.

Market Segments: Helping Poor and Wealthy People in Need In relation to positioning and the generated media attention, it is important that the NH Cardiac Hospital is part of the NH Group. The name attracts people and the hospital is visible in many places within society. Heart clinics (Coronary Care Units) are located throughout the country and the hospital is involved in various partnerships. The NH Group provides care on more fields, such as oncology, diagnostics and support. All organizational units and associated initiatives collectively ensure a solid market position.

The NH Cardiac Hospital does not view traditional hospitals as competitors because these others focus on the segment of the population that can afford to pay for care while NH also focuses on the poor. Within a broader context, all cardiac hospitals worldwide can be regarded as competitors because the NH Cardiac Hospital is a global leader in the provision of quality care at a low cost to people, irrespective of their caste, population group or means. Demand is never lacking in such a market. The true competitor is completely different since the demand for cardiac operations always greatly exceeds the number that can be provided. Especially in a country such as India, the real competitor is no hospital and therefore no treatment.

Over 50,000 people have been treated by the NH Cardiac Hospital since it opened. The hospital focused initially on children, who are still one of its primary patient flows. The hospital is truly open to anyone in need of treatment in order to support the vision of making healthcare accessible to all. The demand for care will remain considerable in India, where millions of people require cardiac care as heart disease is the number one cause of death.¹⁵

Not all patients at the NH Cardiac Hospital can pay for the treatment they receive. The balance between wealthy and poor patients is important otherwise the business model would simply not hold. When wealthy patients pay for their entire treatment and extras such as private rooms, the proceeds are used to help poorer people. The discussion in the West that wealthy people are taking the place of the poor is being turned on its head: the greater the number of places for the wealthy, the greater the number of places for the poor! NH ensures that the patient flow strikes a balance between wealthy and poor people, but life-threatening situations always take precedence. About 19% of patients pay less than the break-even costs and in some cases patients even pay nothing. If people cannot afford their operation, the NH Cardiac Hospital pays half and the other half is provided by the related foundation where financial contributions are collected and saved from former patients, wealthy contributors and companies.

People from all over the world travel to India and the number of medical tourists increases every year (approximately 150,000 in 2005).¹⁶ This helps strike the balance that is so important within the NH Cardiac Hospital.

Customer Value: Limiting Barriers to Cardiac Care Access Patients who visit the NH Cardiac Hospital for treatment receive high-quality cardiac surgery and efficient services at a low price. The hospital generally focuses on lowering financial, geographical and emotional barriers. That is not easy in a country where access to healthcare is limited by uncomfortable and expensive transport for the local population.¹⁷ The quality of the service provided is also reflected in exceptional success rates and a low mortality rate. In 2010 the NH Cardiac Hospital performed around

¹⁵Kaul (2011) and Shetty (2010).

¹⁶Sharma (2010).

¹⁷RNCOS Research (2006).

30 major operations daily while other large Indian hospitals managed only half this number. With a mortality rate of 1.4% within 30 days after a bypass operation (one of the most common heart operations) in 2009, the NH Cardiac Hospital is one of the best hospitals in the world (the hospital average in the USA was 1.9%). Patients feel welcome and are treated with professionalism by well-educated, well-trained, and well-equipped staff. They receive attention, care, and commitment. The history of the hospitals founder, Dr. Shetty, most likely influences the positive emotions that these patients experience.

Patients are also charged prices that correspond to the treatment they require. The cost of the operation is determined beforehand and does not change if complications arise or if a patient has to stay longer in hospital. It depends on the patient's means to pay for treatment. The possibility to create personal (payment) plans means that the NH Cardiac Hospital never turns away even the poorest people. An open heart operation generally costs around INR 110,000 (approximately USD 1700 or EUR 1500). This is low, even for Indian standards (INR 250,000, approximately USD 4000 or EUR 3600).¹⁸ The cost for a similar operation in the West is mostly 10–20 times higher. Nevertheless, the cost is often still (too) high for the Indian population. Ultimately, many people do not pay the full amount.

Although cardiac surgery often involves major operations, treatment does not entail any additional risks. Surgical treatment can always fail, but this risk is significantly lower at the NH Cardiac Hospital compared to other cardiac hospitals due to the high quality of the operations that are performed. The healthcare experience for foreign patients from Western countries in the hospital environment is different to what they are accustomed to in their own country. The risk for customers is generally low. The NH Cardiac Hospital creates customer value by building a bridge between demand and broad access to cardiac care.

Delivery: Bring People to Healthcare, and Healthcare to People The NH Cardiac Hospital realizes its vision through the care it delivers. Patients must acknowledge the accessibility and affordability of the treatment they require. The hospital uses its extensive network to bring healthcare to people and vice-versa. Patients can get into contact with the hospital in various ways, for example via access to the telemedicine network. The telemedicine network comprises three parts: (1) the Coronary Care Units: units in other hospitals where NH staff are on hand; (2) the Teleconsultation Network: connects state hospitals where basic screening can be carried out via teleconsultation and (3) the Family Doctors' Network, which consists of doctors equipped with software that allows them to send the results of ECG scans quickly. Family doctors receive a detailed advisory report from an NH consultant via the Internet within 15 min. Modern telecommunications technology has always been

¹⁸India Knowledge, Warton (2010) and Bhattacharyya et al. (2010).

important to the hospital, especially in order to increase access to healthcare in rural areas. Camps are also organized for people in rural areas (often sponsored by Rotary or Lions clubs), where diagnoses are made by doctors and a cardiologist with access to modern technology. If required, transport to cardiac hospitals is arranged for patients, which helps resolve the distance problem.

The number of hospitals is increasing. In doing this the costs are logically kept as low as possible. Several new hospitals are currently being built in rural areas, with only one floor to save costs. Air-conditioning is limited to operating rooms. This does not pose a problem since patients are not accustomed to having it at home. The overall cost per hospital with 300 beds is USD 5.5 million (EUR 5 million) and construction is completed within 6 months, which are incredible figures compared to Western countries. The new hospitals also extend beyond the borders of India. A new hospital is built in the Cayman Islands, which also helps patients from the US market. As Dr. Shetty states, it is extremely important to keep the NH spirit in this expansion. That is why key positions in the new hospitals are filled by true culture carriers—the “mother bees”—who have worked with NH Cardiac Hospital for a long time. They have to instill the culture and mission within the new hospitals. To support this, the way of working is recorded in a “NH Constitution”. This details the prescribed way of working for all new hospitals and builds upon the original concept.

An insurance program called “Yeshasvini” has been developed to further stimulate accessible care for the poor. Dr. Shetty achieved this by working together with the government—which helped gain the trust of the local population—and with existing care facilities in the vicinity of Karnataka where there is a lack of available care for many patients. The insurance program is cost-effective and Dr. Shetty noted that poor people could use the concept of cooperatives (joining forces to create bargaining power) in more situations. The hospital strengthens the Indian healthcare system with this insurance model. More members visit hospitals without any additional costs.

Operation: The Pursuit of Operational Excellence Operations require good personnel and sound systems. Inspired by the Lean philosophy, the NH Cardiac Hospital has scrutinized the entire implementation process for cardiac care and imposed high quality standards in the quest for operational excellence. Doctors become super specialists by specializing in specific parts of the process for an heart operation. Costs are saved by not having to train personnel to carry out work they will not do anyway and by maximizing the leverage of key expertise. Top specialists are very scarce in India and used extremely efficiently in surgery. Experienced nurses and lower specialists receive intensive training to be able to prepare and finish an operation, such as opening and closing the patient’s torso. This greatly increases the number of treatments done by top specialists. Whereas a specialist is usually fully booked with two operations a day, top specialists at NH Cardiac Hospital perform eight.

Doctors do not receive lower salaries than in other Indian hospitals. They receive fixed salaries but work longer and perform more surgery. In organizational terms, less than a fourth of organizational costs concern salaries. In the West, salaries account for over 50%.¹⁹

¹⁹Khanna et al. (2005). Used more frequently in this case.

Salary costs help but do not result in treatments that 10–20 times less expensive compared to Western countries. All the systems used by the hospital facilitate the level of efficiency pursued within the organization. A distinction can be made between systems used directly in treatment (such as X-ray equipment) and supporting IT and information systems.

The manner in which the hospital works together with suppliers and partners is of immense value. High volumes ensure strong purchasing power. The NH Group enjoys a powerful position in the procurement market for medical supplies and equipment and is trend-setting given that it accounts for 12 % of all cardiac procedures carried out in India. It is abundantly clear that the NH Cardiac Hospital benefits from this. It keeps prices low by negotiating and avoiding long-term contracts. The name of the game for NH Cardiac Hospital is actually to increase the number of buying moments to every month or even week. Certified suppliers then have to give a quote on standardized products with stipulated quality levels and have to compete in an e-auction. A great deal of energy is invested in unraveling the supply chain to save costs. Sutures, for example, are no longer procured from a large pharmaceutical company, but from suppliers during an earlier phase of the production chain. This enables the procurement of thread and needles at 10 % of the cost. Another aspect of the business model is that the organization eliminates the process of distributors and lowers purchasing costs by negotiating more directly and forging important partnerships with private and public organizations. Some of these partnerships are innovation-based, such as that with Texas Instruments, which led to a reduction in the cost of X-ray plates. Overall decreases of 35 % are reported due to more aggressive purchasing.

The focus on quality and lower costs is also visible in IT procurement and partnerships. The entire infrastructure was replaced recently within a period of 33 months. Data is now shared in the “cloud” between 32 hospitals, and this includes digital patient records. NH Cardiac Hospitals now works with Linux (since this saves license costs) combined with SAP and ERP. The IT department responsible for coordinating and organizing this consists of five people. Realization and maintenance are outsourced entirely (“since we are not leading in IT ourselves”). Total IT costs are less than 1 % of overall costs!

Suppliers wish to remain connected to the hospital so that they can continue providing a high volume of products and services. There are even suppliers who deliver below the initial cost price because all their income on machines is profitable enough thanks to the high volume. Developing own material is another way to obtain cost-effective access to different supplies. The high volume and market position enable that. Greater innovation (e.g., own software development) also helps drive down costs, as well as partnerships with knowledge institutes and universities around the world. The aim of all these measures is to keep operating costs to a minimum. They all benefit the model: lower costs—lower prices—higher volume.

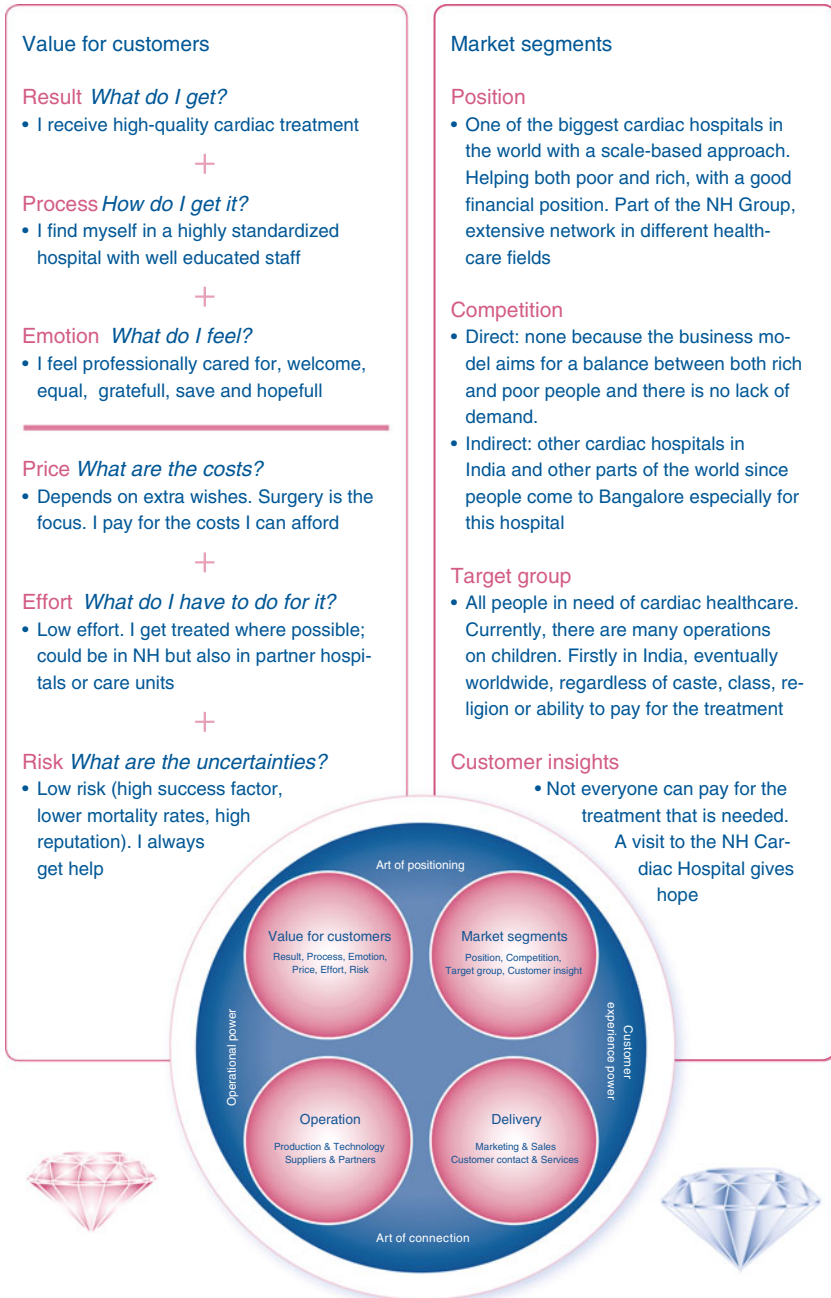


Figure 9.1.2 Value for customers and Market segments of Narayana Hrudayalaya Cardiac Hospital

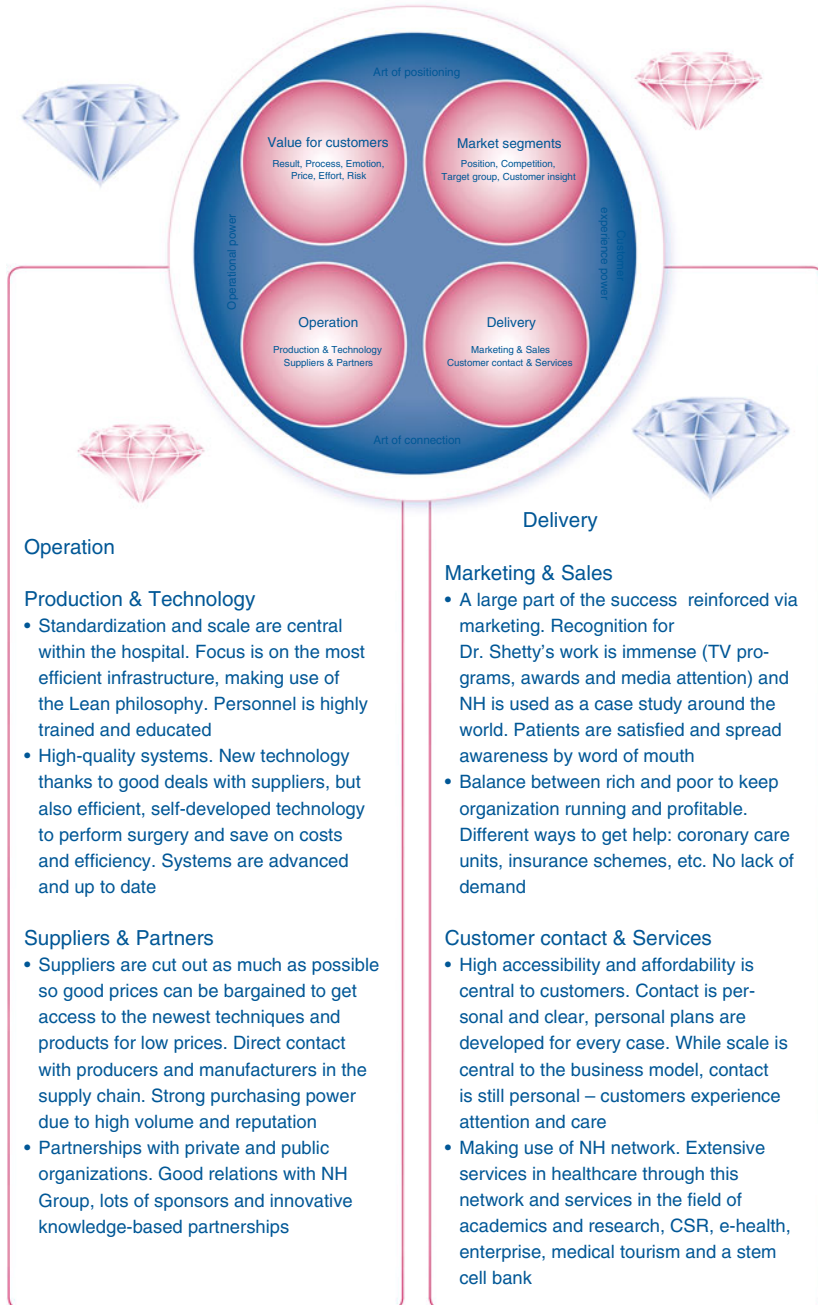


Figure 9.1.3 Operation and Delivery of Narayana Hrudayalaya Cardiac Hospital

9.1.3 *Result: The NH Cardiac Hospital: A Beating Heart in Cardiac Care!*

Some Examples of the Awards Dr. Shetty Has Won with the NH Cardiac Hospital

2012—ET Awards, Entrepreneur of the Year (Dr. Shetty)
2011— <i>The Economist's</i> 2011 Award for Business Process Innovation
2010—India Healthcare Awards, organized by ICICI Lombard General Insurance and CNBC-TV18. Narayana Hrudayalaya won the “Specialty Hospital” award
2010—In the field of cardiology, Dr. Shetty received an award for “focusing on affordable quality care for everyone”
2005—Award for Social Entrepreneurship—World Economic Forum
2005—Schwab Foundation’s Award
2004—Padma Shri for Medicine award
2004—India Innovation Award—By NDTV & EMPI (awarded to the Micro Health Insurance Division)
2004—The Rotary Club’s Citizen Extraordinaire award
2003—Dr. B.C. Roy award
2003—Padmashree award
2003—Sir M. Visvesvaraya Memorial award
2003—Ernst & Young—Entrepreneur of the Year
2002—Rajyotsava award
2001—Karnataka Ratna award

The value that the NH Cardiac Hospital creates for patients is quite clear: the accessible and affordable care it provides can be the difference between life and death. NH Cardiac Hospital gives that to everyone, regardless of whether or not people can pay. You could say that the hospital strikes a balance by focusing on people who can easily pay and on people who would normally not be able to pay. That differs in the target group approach that traditional hospitals often seem to take. Wealthy customers contribute to the payment of the hospital’s overall costs and the NH Cardiac Hospital then implements volume from all patients to strengthen the business model which is also valuable for the reputation, expertise and cost levels. In this way, the NH Cardiac Hospital makes a huge difference to people whose financial and social situation would have prevented them from ever receiving the necessary medical treatment (in 2004, 37% of operations were at or below break-even cost). By increasing accessibility in various ways, such as via the heart clinics (Coronary Care Units), people have easier access to affordable healthcare in India from the outset. Patients of the NH Cardiac Hospital confirm their positive experience with the holistic approach to cardiac care provided by the hospital.

The NH Group is owned by Dr. Shetty and his family. JP Morgan and Pinebridge (formerly AIG) each hold a 12.5% stake in the company, and chairman and delegated director Kiran Mazumdar-Shaw of the biotech firm Biocon holds a 2.5% stake. The hospital has been profitable since its establishment and has a higher profit margin after tax compared to American hospitals (7.7% compared to 6.9%). On the whole, there is considerable attention from American investors. A foundation has also been established to enable educational programs in particular because Indian legislation does not permit such programs within private companies. The NH Cardiac Hospital is a private company and in no way affected by the restrictions imposed on nonprofit organizations in India. The combination of the various entities supports the hospital's performance in the long term.

The hospital's personnel are proud to be part of the vision of founder Dr. Shetty. Many doctors find the work they do gratifying. Training, education, facilities and the number of patients provided by the hospital promote further specialization. Everything is intended to increase the number of treatments, access and affordability for the masses. Comprehensive post-graduate training programs are provided for doctors and other medical personnel. The purpose of these is to bridge the gap between new cardiologists that are required and the decreasing number of doctors who graduate in India every year. Doctors and medical personnel become experts quickly because they only participate in training programs that relate to their specific area of work. Very few specialist personnel leave the hospital. Their salaries are good enough, the intrinsic motivation appears to be tremendous and they can dedicate themselves to helping as many patients as possible. Personnel are also grateful for the opportunities they are given to specialize. Working for the NH Cardiac Hospital also gives them a good social status. Furthermore, they gladly share the ambitions of Dr. Shetty. Besides the fixed group of personnel there is also a flexible group. Nurses are also grateful for the opportunities, training, and good work, but there is also more financial pressure to move to better-paying privatized hospitals in India or the Middle East.

The NH Cardiac Hospital is a centre of excellence created to help the global masses. Its core activity, namely treating people with heart disorders, is of immense value for society. Treatments save lives. The hospital helps to improve quality of life by working together with patients to combat the number one cause of death in India. The visible entrepreneurship within healthcare results in treatment that people need. Revenues are meant to be reinvested in the good cause of further growth and expansion. The business model of the NH Cardiac Hospital is an inspirational example for society. According to Dr. Shetty, India was in need of a new healthcare approach given the sheer size of its population. It is unique to healthcare that this mass-market approach works in this manner and yields such positive results. The business model could be used in other medical facilities or distributed globally to help more people in need.

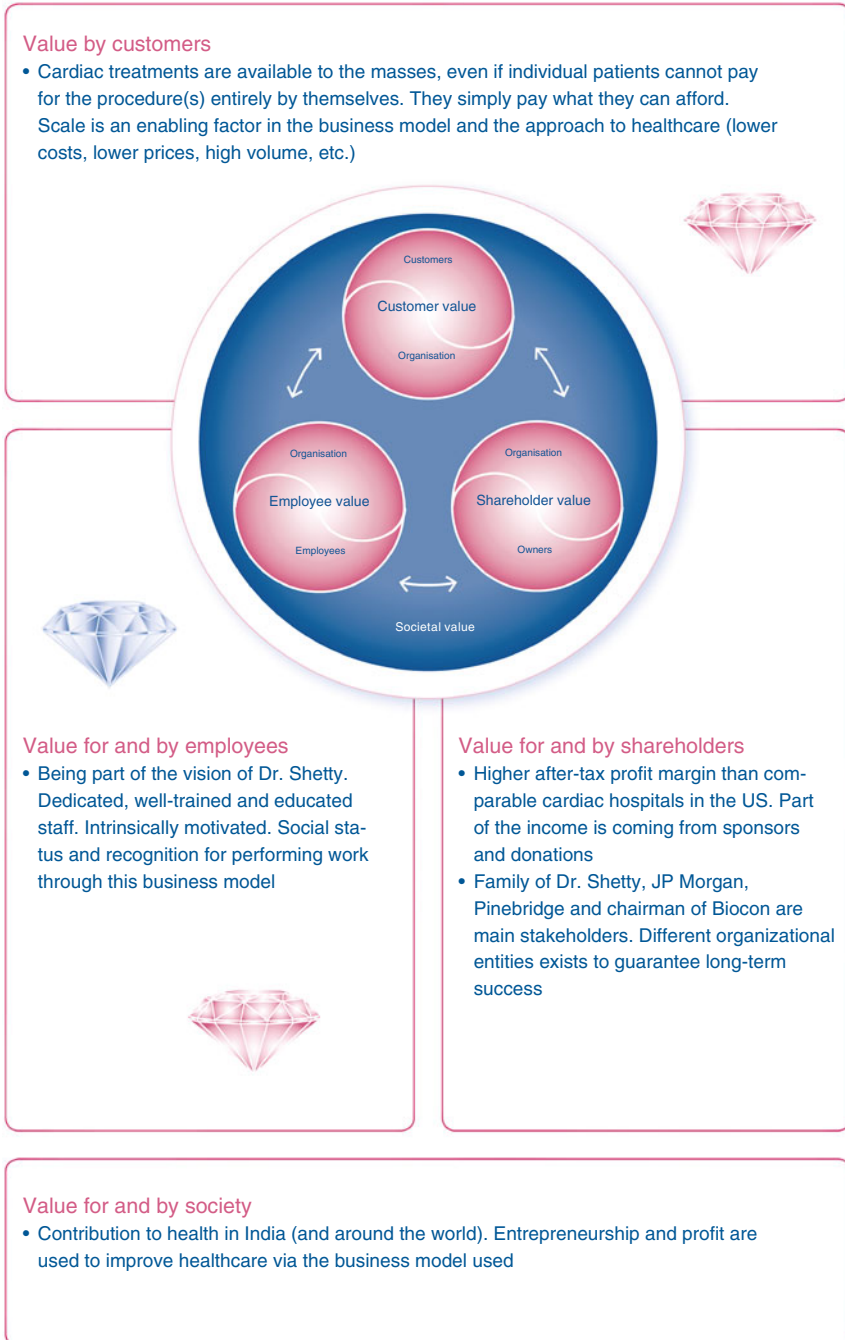


Figure 9.1.4 Value for and by stakeholders of Narayana Hrudayalaya Cardiac Hospital

9.1.4 The Brilliant Lessons of Narayana Hrudayalaya Cardiac Hospital

What can we learn from this NH Cardiac Hospital:

- The vision and mission of the NH Cardiac Hospital, namely “to make high-quality healthcare accessible and affordable for the masses throughout the world” is unique. The achievement of this vision and mission, through the exploitation of economies of scale and the adoption of a service-driven mass-market approach to cardiac care, is something that has never been done on this scale. The business model relies on standardization and economies of scale, which result in lower costs, which lead to lower prices and greater volume. This cycle repeats itself with higher volume that leads to even lower costs and lower prices. The most important lesson to be learned is that extremely complex cardiac surgery can be combined with the realization of economies of scale. The scale of the operation influences the way in which the NH Cardiac Hospital organizes care, and the development of more experienced medical personnel. This combination results in a learning organization with efficiently organized low-cost processes that deliver high success rates.
- The use of scale and reputation is cost-effective, as is the optimization of scarce resources in the effort to meet the demand for cardiac treatment. The NH Cardiac Hospital is an authority in the procurement market. Specialist procurement teams use the size of the hospital as leverage. The hospital procures machines, medicines, and other products at very low prices, and sometimes even free of charge. The volume-based approach means that the cost structure is completely different from that of other world class hospitals in western countries.
- Many people are eligible for treatment thanks to the emphasis placed on finding a balance between wealthy and poor patients. The traditional paradigm in which a decision is made to treat poor people or rich people is transcended by simultaneously increasing the volume of supply rather than simply taking the existing capacity as a given.
- When planning personnel training the emphasis is on the practical application of the training. This results in doctors who specialize in performing a single operation, or even certain parts of operations. This saves the time it would take to provide them with training in all the general aspects of the various operations, and ensures that they become even more specialized. Personnel are only employed where necessary and can progress to performing more difficult procedures on an elective basis. This ensures that they deliver the most added value in their own fields, and nurses take care of all related aspects which are less complex. This is the other way round in the Western educational model where specialists receive a broad training and then specialize in a particular area, but still perform a fairly wide range of actions (themselves).

- The business model proves that it is possible to make a profit while also contributing to social improvement. In this case the reinvestment of profit ensures that entrepreneurship serves society. The very important role that the NH Group plays in the lives of millions of people shows that doing good can really pay-off.
- Charity is not scalable. If you truly want to have an impact and change the world for many people, you have to realize that this requires a self-financing model. If you want to scale, you cannot be dependent upon donations. You need to find ways to obtain greater income if you deliver more results and provide more treatments. Use scarcity as inspiration and search for new, creative and innovative ways to overcome this.

9.2 ThedaCare

Making things a little bit better for every patient every day

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Prelude *Stanley is an expat from America who lives with his family in Amsterdam. After a bicycle accident, he ends up in a coma, lying in a hospital far removed from his relatives in Appleton, Wisconsin, USA.²⁰ As Stanley's family want to bring him home, he is transferred to ThedaCare on 4 September 2013. Upon arrival in the hospital in Appleton, he is admitted directly and sent for an MRI a few minutes later. By continuing to experiment and performing exercises with him, Stanley slowly emerges from his coma. Six months on, Stanley is able to do most things once again and can function fully within his family. Stanley is now living proof of the brilliant case of ThedaCare. Aside from the conspicuous desire of nurses and doctors to continue experimenting and looking for the right treatment, Stanley's relatives speak highly of the quick turnaround time for treatment and the degree of involvement in decisions surrounding his health. The experience and findings that come up for discussion in this case are also to a degree the experience of Stanley and his family. There is, of course, no scientific proof that Stanley would not have emerged from his coma in another hospital. But Stanley is convinced of this. We invite you to form your own opinion if they are able to make such a difference after reading this case.*

Introduction ThedaCare is known regionally and internationally for the highest quality care combined with relatively low costs. Its roots stretch back more than a century and find their origin in the US state of Wisconsin. Over the years the care institution has had several names and alliances, but the mission has remained unchanged. The primary focus is still accessibility to world-class care for society.

²⁰The experiences of Stanley are personal, partially based on a true story and a fictional one.

In its current form, ThedaCare is the result of a merger between Appleton Medical Center and Theda Clark Medical Center in 1987. In 1994 the United Health of Wisconsin Insurance Company joined as a partner. Since 1999 the hospital has operated under the name ThedaCare, named after Theda Clark Peters. She was a community activist responsible for various projects within the Neenah Public Library and the hospital that now bears her name. The reasons why it was named in her honor are found in her enormous generosity and tremendous involvement to improve the health of the community.

Currently ThedaCare consists of 5 hospitals, 22 specialized clinics and more than nine affiliated care institutions. Every year, in excess of 150,000 patients are helped at the institution; in 2012 more than 6000 people were employed there.²¹

In the last decade ThedaCare has become known around the world for the application of continuous improvement in healthcare: Lean Healthcare based on the Lean concept as developed by Toyota. More than 15 million yearly incidents resulting from unnecessary medical errors in the USA, combined with continuously rising costs in healthcare, were the reason to start improving working drastically on the provision of healthcare. Curbing unnecessary errors (such as medication errors, wrong-side surgeries, infections and incidents connected to falling down) while simultaneously cutting down on the expenditures, resulted in revolutionary changes in ThedaCare's healthcare services. The results of ThedaCare's Lean-based journey over the past decade are promising: the number of errors has declined drastically, the medical results for patients have improved, the level of employee satisfaction has increased and savings of USD 27 million (EUR 24 million) have been realized.²²

9.2.1 The Cornerstone: Patient Centered Continuous Improvement

ThedaCare desires to achieve its goals by continuous improvement—investigating what can be done better every day, for every patient and with every treatment and then simply doing it. This includes removing components or steps that do not add any value for the patient and/or employee. Continuously improving and striving for perfection in healthcare is the essence of ThedaCare. Deeply rooted in the culture is this commitment to patients and the various communities. The promise that the institution makes in that regard is: always aim at setting the highest standard and delivering accordingly. This goes hand in hand with making performances and results measurable and visible. This way customers and partners have insight into the processes and results of the organization.

²¹Originally from: www.thedacare.com/whoarewe, on 3 October 2013.

²²Toussaint and Gerard (2010).

In 2002, ThedaCare starts with Lean. The CEO of ThedaCare Center for Healthcare Value Dr. John Toussaint, is also the founder of the Lean improvement culture and method in the organization., The institution goes to work, inspired by John’s statement that: “I do not want ThedaCare to merely remain good. I want it to become fantastic.” By studying organizations both in and outside of the healthcare industry, the doctors, internal consultants and management of ThedaCare arrived at the joint conclusion that organizations that are really focusing on continuous quality improvements can create impressive value for all stakeholders.

With the help of consultants, ThedaCare develops its own ThedaCare Inpatient System (TIS), based on the Toyota production system. “Improving the health of the community” remains, as a higher goal, the basis for ThedaCare.²³ In line with that, the audacious goal is “transforming” healthcare around three linked components:

1. improved moral of people employed in healthcare;
2. improved quality, with a focus on the reduction of unnecessary errors and the removal of waste²⁴;
3. improved productivity.

As the leader of ThedaCare, Dr. Toussaint desires to realize the higher and audacious goals and to create value by doing *less*. He deems this as *the* way in which to stand out amongst the increasing competition in the healthcare market. It is a flowing process in which the patient is at the center of attention and not the agenda of the doctor, the institution or other interested stakeholders. Instead of waiting for doctors and receiving the wrong medication and materials for diagnosis that are not present, the patient sees the doctor at the agreed time, full attention is given to them and consultation takes place at the right moment. This is achieved, among other ways, due to the fact that each patient has his/her own care team.

ThedaCare has determined core values and core qualities for fulfilling its goal. It is an open culture in which participants want to learn—one that demands honesty and a critical eye for yourself and your colleagues.²⁵ For this to work, courage is required. Within current healthcare, “shame and blame” are important cultural characteristics.²⁶ That is understandable due to the responsibility for people’s lives, but this makes an open and transparent working culture more difficult at the same time. In order to arrive at a feedback culture in which the participants can learn from their mistakes, three elements are

²³In Lean methodology, the term ‘True North’ is often used to indicate the direction where you want to go which results in the achievement of the higher goal. True North (*geodetic north*) refers to the direction along the earth’s surface towards the geographic North Pole. A clear improvement point to be realized, so that you can check en route as to whether you are still heading towards the right place. See also: Smalley (2011).

²⁴Eight forms of waste are defined on which business operations specifically focus. In that regard, it concerns: waiting, motion, talent, defects, over-production, inventory, transport and over-processing. See also: Rother and Shook (2003).

²⁵Rother (2009).

²⁶Toussaint and Gerard (2010).

required: courage, integrity and honesty. The demanded brand values of ThedaCare's umbrella organizations needed to fulfill their promise are: empathy, innovation, respect, and teamwork. Decisive in the creation of added value for customers, partners, and colleagues is the ability to put yourself in the shoes of the relevant stakeholder. Continuously improving by looking critically at the value stream stimulates innovative thinking *and* action. With due respect, ThedaCare strives to let everyone who is part of the value stream for the patient lead a meaningful life—both at ThedaCare and beyond. Consequently, the organization spurs its employee on to actively work on a valuable life.²⁷ In order to realize this and to prevent errors, communication and teamwork are crucial. ThedaCare provides demonstrable evidence for its vision and positioning. For instance, patient satisfaction levels have risen from 65 % to 85 %. In addition, the number of errors with medication adjustments between admission to the hospital, discharge and aftercare has declined to almost nil. The documentation time for nurses has also been halved, as a result of which they are able to spend more direct time with patients.²⁸

²⁷ Idem.

²⁸ Idem.

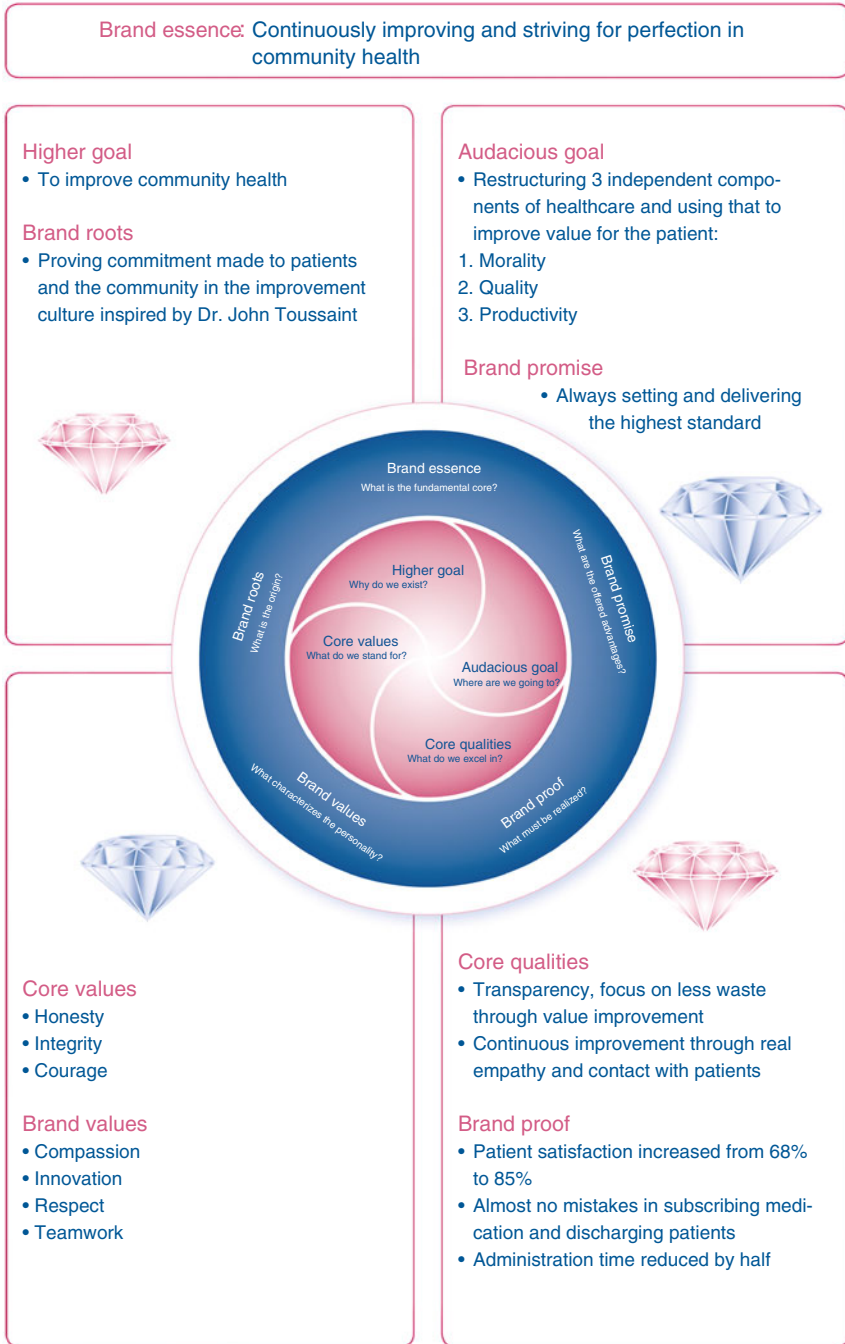


Figure 9.2.1 Vision and Positioning of Thedacare

9.2.2 *The Business Model: Lean, But for People*

Market Segments: Quality Leader in the Region and Global Fame with Continuous Improvement The hospitals and clinics of ThedaCare are located in northeast Wisconsin. The ThedaCare group has a number of hospitals, including the Appleton Medical Center, the New London Family Medical Center, the Riverside Medical Center, Shawano Medical Center and the Theda Clark Medical Center. All of these hospitals and clinics strive for collaborative care based on the Lean method. Jim Raney, CEO ThedaCare Inc., Appleton locations believes in the increasing focus on patient experiences as development in healthcare. According to him ThedaCare was a follower on the local market at the start of the Lean movement.²⁹ Market research showed that the LaSalle Clinic was seen as a quality leader instead of his own institution. In addition, other competitors from the region, such as St. Elizabeth's and Mercy, were ahead of ThedaCare on this list. Thanks to the growth in quality, ThedaCare has improved its position to that of market leader and is now financially solvable.³⁰ In spite of taking over top spot in the region, ThedaCare is experiencing financial competition from the increasing meddling of insurers and the resultant market forces. As a healthcare practitioner, the organization only influences a part of the total healthcare costs. Consequently, the low costs cannot be directly converted into a lower premium for the insured, as a result of which the patient sees little of the financial benefit. In addition, large integrated care systems, such as Aurora Inc. from Milwaukee, use economies of scale and groups of insured people to better convert this position into lower costs for insurers and consequently contributors.³¹ The advantage that ThedaCare has in turn is that it employs its own doctors.³² Other competitors can be seen in other healthcare institutions that are also applying lean, such as Virginia Mason in Seattle and Henry Ford Hospital in West Bloomfield (Detroit area). On a global level, ThedaCare distinguishes itself through its leadership in every layer of the organization. Employees independently and systematically improve their services, while management retains the total overview and is directly and visibly involved in the delivery of care to the customer.

ThedaCare has reduced its target group. It has opted to specialize since it started using the Lean system. Only those treatments are offered where it is certain that top quality can be realized for a low price. Focus has been put on the treatments for back

²⁹ Originally from http://article.wn.com/view/2012/04/27/Fitch_Affirms_ThedaCare_Inc_Wisconsin_Revs_at_AA_Outlook_Sta/#/video, on 19 September 2013.

³⁰ Toussaint and Gerard (2010).

³¹ Originally from <http://www.businesswire.com/news/home/20080911006086/en/Fitch-Rates-90MM-ThedaCare-Wisconsin-2008-Bond>, on 19 September 2013.

³² Originally from <http://www.fiercehealthcare.com/press-releases/fitch-rates-thedacare-inc-wisconsin-2010-bonds-aa-affirms-outstanding-outlook-stable>, on 19 September 2013.

and neck pain, cardiology, oncology, bariatrics and childbirth care. ThedaCare is in constant conversation with customers, integrating their feedback and the acquired customer insights into their daily process. So they are taking new steps every time in further developing their continuous improvement culture. The first step in that is to identify what customers are prepared to pay for, in other words: what they find valuable. The next step is to investigate which activities in the process add value. Based on these findings, the process of value creation can be better organized and become more streamlined. In that regard, customers are stimulated to constantly speak out on their needs, desires and suggestions.

Customer Value: Central Role Reserved for Patients ThedaCare takes a critical look at the activities in the care process and the extent to which they add value for customers. Everyone—from doctors and nurses on the front line, to insurers, employers and patients—must spend time and energy defining the actual added value in order to optimize all patient-related processes. From the patient’s perspective, a loss of time is not the equivalent of a waste³³ of money but of a waste of “health.”³⁴ In more positive terms: being helped earlier adds not only to a faster but also to a better and more complete recovery.

As a customer, you know that ThedaCare offers good treatment with regard to back and neck pain, cardiology, oncology, bariatrics, and childbirth care and that they are quick in making an appointment, whereby your schedule and care requirements as a patient receive the most attention. Thanks to the close collaboration between the many components of the hospital, care can always be offered in the vicinity of the customer. The staff has been trained to deal with customers quickly and correctly: a process characterized by the fact that you need to wait as little as possible and are decently assisted. By first listening to the customer and then jointly taking a decision concerning the care process, employees act as a partner of the customer with joint responsibility. By focusing on efficiency in the training of its employees, ThedaCare ensures that there is more time to be spent directly on patients, so that there can also be space for the emotions and experiences of the customer. This followed the latest quality benchmark in the field of customer experiences in communication from the WCHQ hospital data³⁵ that showed that not all components of ThedaCare already scored high in this aspect in 2013. By contrast, ThedaCare claims that since 2004 it has the lowest price increases of all hospitals in northeast Wisconsin.³⁶ From a risk perspective, it is valuable that the institution

³³Eight forms of waste are defined on which business operations specifically focus. In that regard, it concerns: waiting, motion, talent, defects, over-production, inventory, transport and over-processing. See also: Rother and Shook (2003).

³⁴Toussaint and Gerard (2010).

³⁵Rother (2009).

³⁶Originally from <http://www.thedacare.org/Why-Thedacare/Cost-and-Quality.aspx>, on 11 September 2013.

is assuming a pioneering role in making quality transparent. Based on Maslow's statement that it is better to be aware of your incompetence than unaware, this produces a lower risk profile.³⁷

Delivery: Improving the DNA ThedaCare focuses on continuous improvement. This results in shorter waiting times, better collaboration between employees and the resulting experiences of customers. An interesting phenomenon amongst people who work with continuous improvement is that the greater the visibility of improvement potential, the more modest people become regarding the current situation and their performance.³⁸ From the perspective of marketing and sales, this is striking. The large degree of unpretentiousness of ThedaCare is also evident in the short clips to be found on the internet.

The desire to continuously improve based on what is valuable for the customer makes the role of customer contact even more important. Central to customer contact is connection and partnership. Customers are supported in all their needs and in all phases of the care process—from diagnosis to aftercare—by a dedicated team, the so-called Community Health Action Team (CHAT). The team makes sure everyone is connected where necessary and takes care of the proper coordination between the different units and institutions. It is already difficult enough for patients to find their way in one ward, let alone when they have to go to different hospitals for treatment. The CHAT team looks beyond the boundaries of its own organization to ensure that the care process proceeds optimally for the patient. An important role in making the patient central to the whole process is also fulfilled by the care team of the patient. This team consists of a doctor, nurse, pharmacist and case manager but not necessarily the same ones all the time. A care plan, setting out medication and therapies, is drawn up in consultation between the patient and the care team. These data are embedded in the electronic file, so that they are accessible and readily comprehensible for the involved healthcare practitioners. This contributes directly to the prevention of unnecessary errors and ensures that patients need to repeat themselves as little as possible thus leaving more time for relevant conversation. An important role in this embedding process is the servant leadership within all components and layers of the organization. This helps to get the best out of the employees and to stimulate them in their professionalism and responsibilities. The clear focus of ThedaCare on adding value to the care chain and removing waste is in the DNA of its employees and provides guidance in all its customer contact. This is what makes ThedaCare brilliant.

³⁷This relates to the four stages of learning from Maslow's competency theory from 1954. See: http://www.ecoisonline.org/pluginfile.php/2650/mod_resource/content/0/downloads/vier_stadia_van_eren_Maslow_.pdf.

³⁸Rother (2009).

Operation: Win-Win Situations The operational strength originates in the continuous focus on the total process. Focusing on customers and allowing their needs to be expressed are also central to the production process. Procedures are critically examined by discussing improvements with the customer. Many process improvements have already been applied, which reduces the time between diagnoses and treatment, curbs the chance of complications and increases the chance of survival. This has been identified and listed through the use of Value Stream Mapping. In this process, every step of a service or treatment is made comprehensible on the basis of which it can be determined if a step in the process does or does not add value. Elements that do not add any value are then removed from the process.

Of course, when optimizing the service standardization options are looked at in an effort to improve quality. The policy that ThedaCare uses for standardization consists of three different phases:

1. upstream: everything that occurs before the patient sees the doctor;
2. middle stream: the dialogue between the doctor and the patient;
3. downstream: the additional information necessary for the doctor and the patient.

In phases 1 and 3, standardization takes place to optimize the process for the patient. Phase 2 is not considered suitable for standardization.

If new technology adds value for customers, it is used at ThedaCare. The sophistication of ThedaCare is also evident from its inclusion in the list of 100 Most Wired Hospitals in the USA, a survey that measures the adoption of ICT infrastructure within healthcare.³⁹

After years of internal experience with continuous improvement, the past few years have been spent optimizing its relationship with suppliers through the use of Lean. As part of the total patient experience, it is important that referrals and other deliveries take place with the same attention as paid to the patient. The aim of all of this is to flexibly adapt the process to the needs of the customer and to work error-free. Giving each other space and working on continuous improvement are paramount. The same applies for tackling bottlenecks quickly and thoroughly, and where necessary even jointly, across the boundaries of ThedaCare's own organization. Care institutions in America and abroad have become partners of ThedaCare. They share learning experiences within the network called Healthcare Value Leaders. It appears that to admit that errors are made and that the care provided is not yet perfect seems to become more debatable than ever. In various care organizations, employees are busy on a daily basis with continuous improvement. However, making this transparent, comprehensible and comparable for everyone still appears to be a constant challenge. The first steps have already been taken within the WCHQ referred to above. Since 2004, comparable quality information has been shared—unfortunately not yet nationally or in an uniform manner.

³⁹Originally from <http://www.hhnmostwired.com/winners/PDFs/2013PDFs/MostWired2013.pdf> on 9 September 2013.

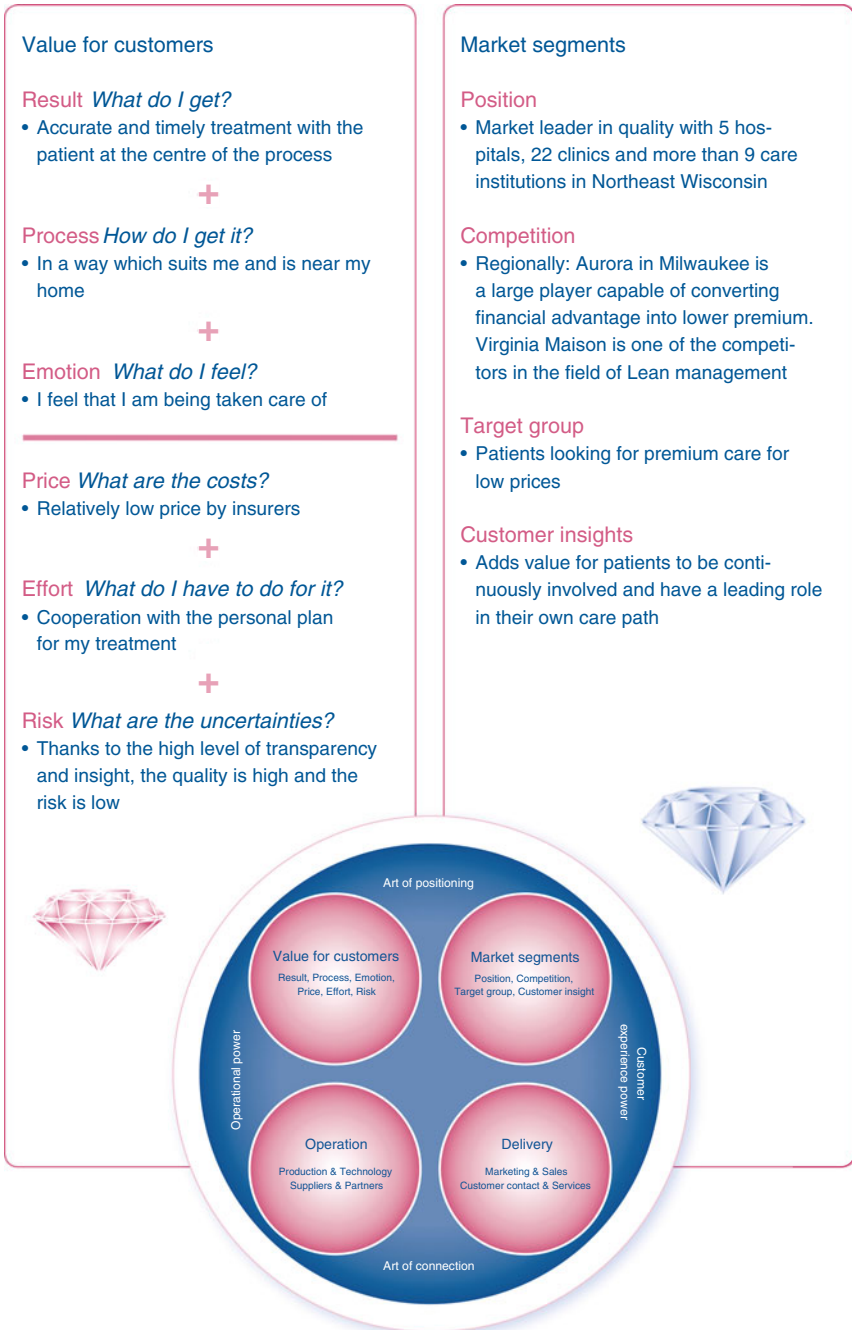


Figure 9.2.2 Value for customers and Market segments of Thedacare

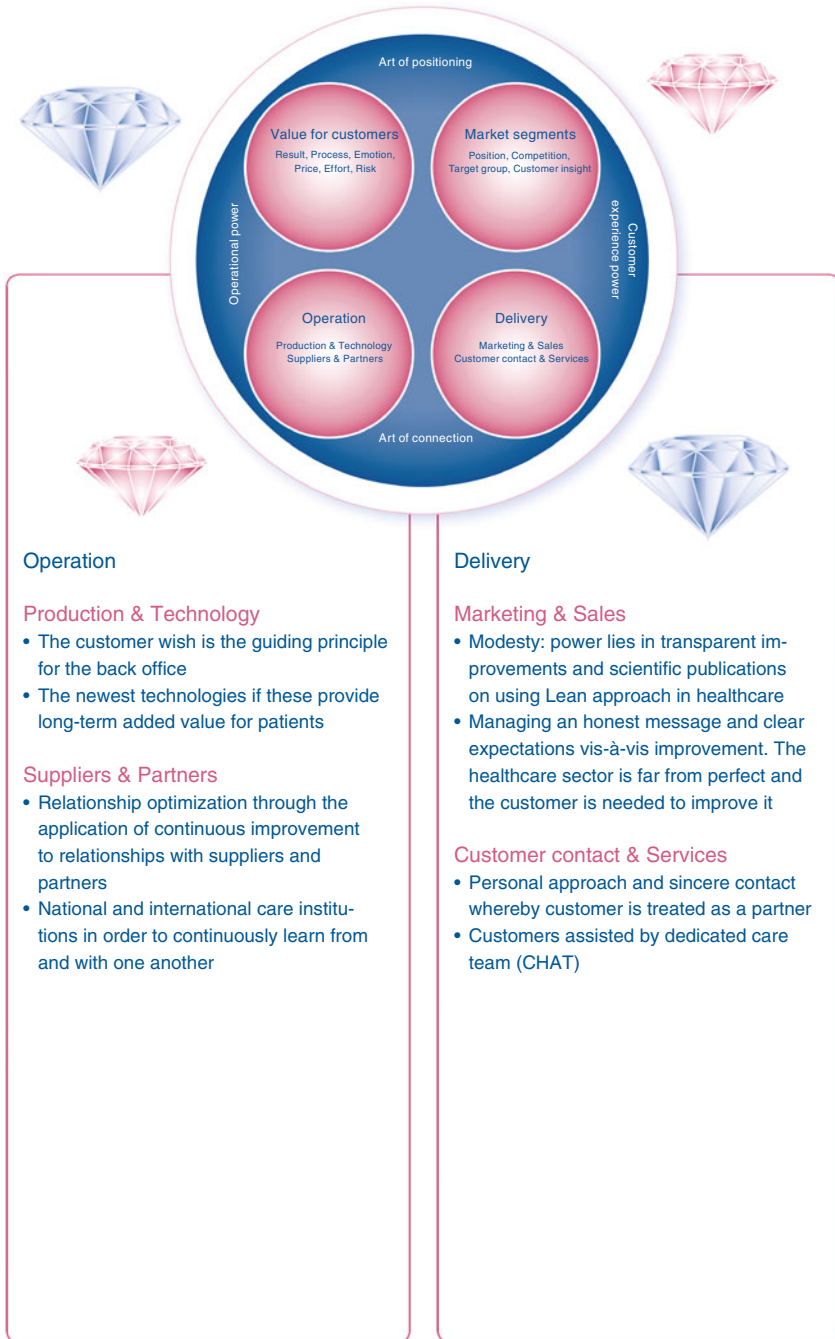


Figure 9.2.3 Operation and Delivery of Thedacare

9.2.3 *Result: You Get What You Measure*

With a course set due north for added value for the customer, results will be produced. A striking result of involvement by and treatment of a person is found in Jeanne Wachowiak, a cardiac patient. She relates: “My care is very personal. ThedaCare helps me ensure that I stay on schedule. Sometimes I think that they care more about me than I do about myself.”⁴⁰ A result can, for instance, be seen in the 90-min target for the “Door to Balloon” times, the percentage of patients for whom a PCI treatment is started within 90 min of the initial medical contact. A success rate of 65 % was previously achieved for heart operations, now it is almost 100 %. In addition, the death rate for these patients was lowered to 8.8 %, relative to a national average of 18 % per year.⁴¹ The time target to go from arrival until the patient receives a CT scan in 25 min, improved from 51 % to 89 % of all cases. In addition, the processes in the field of laboratory testing improved massively. At the start of 2005, 90 % of the analyses were completed within 33 min; now that time has been reduced to 23 min.⁴² Improvements have also been realized in customer contact, such as quicker communication, returning calls and finding results. The biggest piece of evidence for this lies in the increased level of customer satisfaction—a jump from 65 % to 85 %.

The Lean philosophy is focused on creating value for all stakeholders: customers, employees, shareholders and society. The customer realizes immediate value by giving employees input for improvement. In that regard, the customer forms an essential and integral part of the improvement cycle. It is only in this way that the service can be improved. In turn this creates more value for the customer and, by extension, for the organization as well. The institutions become more efficient, which means that costs decline and profit increases. In particular, progress is made by strengthening the collaborative effort between insurers, hospitals, government and patients. As described by Dr. Toussaint, in this process transparency requires measurements in hospitals that are relevant and comparable for customers, insurers, government and the care institution itself.⁴³ The process of defining the proper measurements of quality and costs, implementing these properly and then jointly improving the results demands integrity, honesty, courage and trust. When these factors come together, the opportunity arises for shareholders to compare different companies with one another and to make a proper assessment of the risk profile. This is comparable with the evolution of setting standards in the field of financial

⁴⁰Originally from personal note on <http://www.thedacare.org/Why-Thedacare.aspx> on 3 September 2013.

⁴¹The American Heart Association, ‘Heart Disease and Stroke Statistics Update’. Originally from <http://www.strokecenter.org/patients/stats.htm>, on 12 September 2013.

⁴²Toussaint and Gerard (2010).

⁴³Toussaint (2012).

reporting. As a result major companies are using IFRS and US GAAP thanks to which shareholders can make better comparisons and proper assessments for the benefit of their investments. So the level of insight increases and the level of risk decreases simultaneously thanks to uniform methods of measurement.

In an upward spiral of more satisfied customers, the business model of ThedaCare also produces more employee value. Doctors who used to work as part of the Collaborative Care Team report that the nurses are better informed, think along better and consequently get a more important role during the treatment.⁴⁴ Nurses and junior doctors indicate that whereas the joint start to the day initially meant they had to work a bit longer, the result is that they now need to ask a lot less questions which has reduced the number of misunderstandings. Aside from these collaborative improvements, there is a higher degree of employee involvement and responsibility.⁴⁵ In contrast to these positive results, there is also negative feedback from doctors regarding the desire to standardize as much as possible. As described under Operation above, the policy is maintained here that while standardization is not applied in the dialogue between the doctor and the patient (middle stream), it is beforehand (upstream) and afterwards (downstream).

In line with the higher goal of ThedaCare to improve the health of the community, society also benefits from this. The latest WCHQ quality benchmark is indicative of this.⁴⁶ ThedaCare scores better than both the national and the state averages in preventing errors in safety targets and in mortality rates.⁴⁷

Aside from the normal provision of care, other problems of the community are being studied by multiple disciplines in a Community Health Action Team (CHAT). In all-day sessions they experiment with possible solutions for a problem with the result being that the best solutions are tested in the community for a month. In this way value is created for the organization and process optimization takes place in various disciplines. This also yields solutions for long, drawn-out challenges for society. An example of such a solution is a project whereby poor families are introduced to a community mentor to help them become self-supporting. Another solution is a project for in uninsured farming families where information is given on prevention in order to prevent healthcare costs. In 2009, for example, ThedaCare spent a total of more than USD 30million⁴⁸ (around EUR 27 million) on services for the community. These services include research, education, and medical assistance.

⁴⁴ Idem, p. 27.

⁴⁵ Idem, pp. 73–74.

⁴⁶ Wisconsin Collaborative for Healthcare Quality (WCHQ) is an initiative of various care institutions from Wisconsin to uniformly measure quality information and to make it transparent for potential customers. Originally from: <http://www.wchq.org/hospitals>, on 11 September 2013.

⁴⁷ Originally from http://www.wicheckpoint.org/reports_detail.aspx?hospitalId=110.

⁴⁸ <http://www.thedacare.org/Getting-Involved/Improving-Community-Health/Community-Benefit-Report.aspx>.

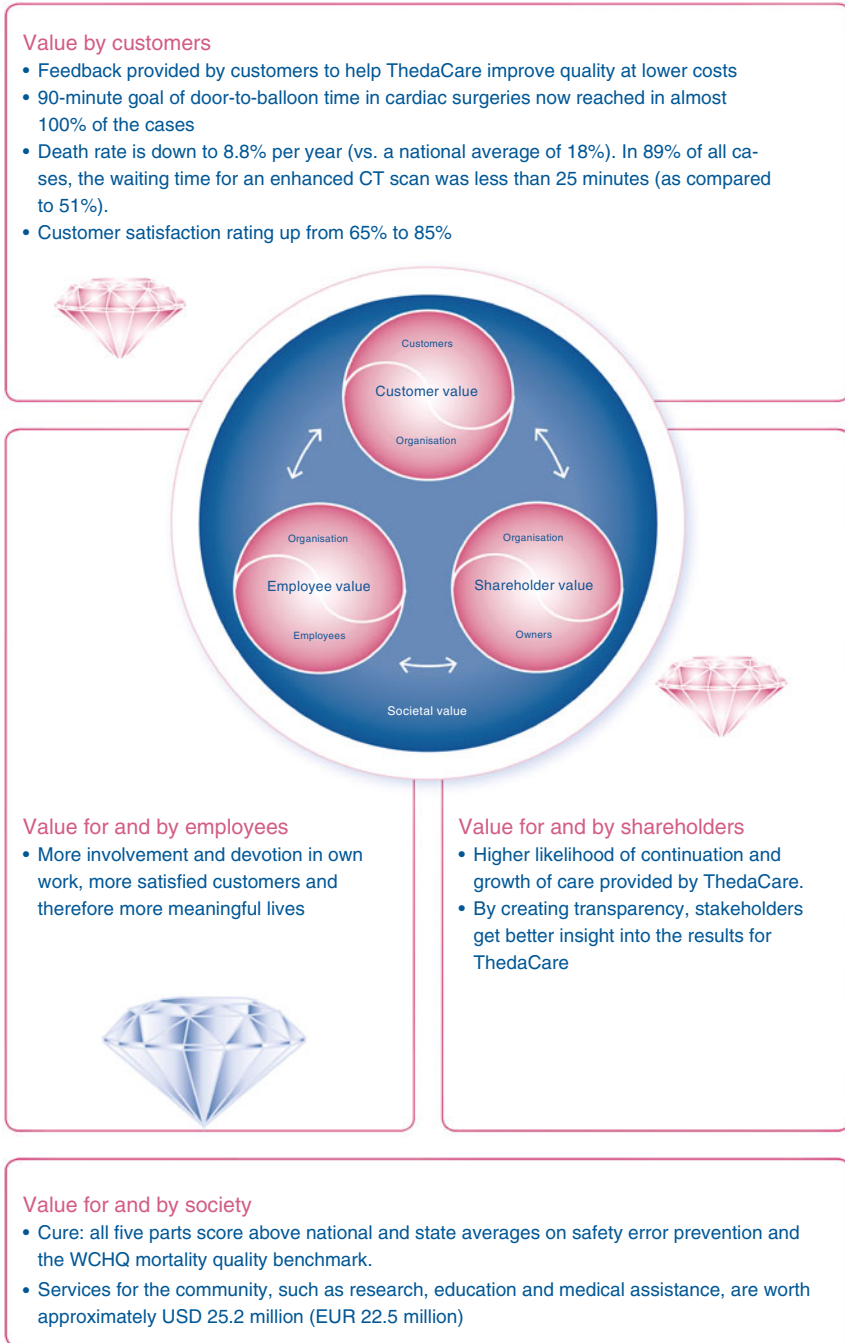


Figure 9.2.4 Value for and by stakeholders of Thedacare

9.2.4 *The Brilliant Lessons of ThedaCare*

What can we learn from an organization which continuously improves itself like ThedaCare?

- Continuously carrying out short-cyclical experiments on a small scale is the key to major improvements. Since the employees themselves are improving within their sphere of influence at various locations within the organization, the process of continuous improvements takes place more quickly and the degree of involvement is higher.
- Measurements produce knowledge and stimulate employees to implement improvements in the right area. In order to guide the improvement process, it is important to properly measure the current status of operations, analyze the results of experiments, and then identify and list what it actually produced. This way successes can be celebrated and discussion is based on actual figures instead of hunches.
- Multidisciplinary teams that work properly together are necessary to continuously improve healthcare. The horizontal patient journey throughout the organization is leading and not the vertical silos of various wards, disciplines and professional hierarchy that are prevalent in healthcare. The direct result of giving the patient priority and working towards the patient goal is that the need arises to work properly together and to improve matters jointly. As a result the quality improvements experienced by the patient become enhanced and the improvements take place more quickly and are more durable.
- Dare to make a choice in the treatments available and excel therein. ThedaCare chooses to carry out only those treatments in which it can be the best based on their philosophy.
- The last major learning point from this case is the strong leadership within all components and layers of ThedaCare's organization that is visible for visitors. Servant leadership helps to get the best out of the employees and to empower them in their professionalism and responsibilities.

9.3 Princess Margaret Cancer Centre

Joining the battle against cancer together

Denise Altena, Esmée Grobbee & Jennifer op 't Hoog @: Jennifer.op.t.hoog@achmea.nl, Phone: 0031 651226420



Prelude *This is a hospital where you are warmly welcomed. It is a place where you had never thought and hoped to arrive at, because this is where difficult times await you. At the same time it is a place where you will feel at home, where you are not only a patient, but also a human being.*

Cancer treatments often involve an intense, long-term process. It demands the utmost of patients. Cancer patients often spend a lot of time in the hospital during treatments. The Princess Margaret Cancer Centre (PMCC) in Canada proves that a hospital can be so much more than a sterile, medical environment. Needless to say, this hospital strives to provide the best treatment for the patient as well as the most personal care. The personal approach is being reintroduced to the process and the treatment which strengthens patients in their own treatment process. A stronger patient is a stronger person, which also makes the post-treatment process easier as well as reintegrating into society. Thanks to the hospitality, compassion and attention of its employees, the hospital feels like a safe haven—a place where the patient and the healthcare practitioner can fight the battle against cancer together.

Introduction At roughly 7.6 million cases per year, cancer is one of the most important causes of death worldwide. This amounts to roughly 13% of all deaths around the world. It is currently the most important cause of death in the Western world.⁴⁹ The expectation is that this percentage will only increase in the years to come. With an ageing society in emerging economies, it could become the same in the rest of the world.

⁴⁹World Health Organization. Cancer. WHO; 2013 [30 July 2013]; Available from: <http://www.who.int/mediacentre/factsheets/fs297/en/>.

The Princess Margaret Cancer Centre (PMCC) in Canada provides the total care that cancer patients need. Founded as an oncological hospital in the Canadian province of Ontario, it is situated amongst other university buildings and the teaching hospital. Consequently, aside from patient care a lot of attention is paid to scientific research and the conversion thereof into the daily practice in the clinic. The focus is on the care for the patient and it is combined with carrying out science at the highest level. And by doing so, major leaps forward are made in the development of cancer treatments. The higher goal of PMCC is clear: We will conquer cancer in our lifetime! Until such time, everything is being done to treat cancer patients as well as possible. This hospital considers passion and dedication of paramount importance in the fight against cancer. This results in a combination of top-quality care at the medical level and personal attention in giving care and guidance. Physicians see a person with an illness instead of an illness with a patient. In this way a real difference is made in the life and surroundings of people. Medical science at the highest level and personal attention—all this in a country as big and vast as Canada. How can such a large province concentrate oncological care and offer personal care to people at the same time?

9.3.1 The Cornerstone: “We Will Conquer Cancer in Our Lifetime”

PMCC desires to conquer cancer by combining dedicated care and top scientific research. Recent figures have shown that one in three Canadians will develop cancer at some point.⁵⁰ This number will increase as the population ages and so that this ratio will only increase in the future. It can be concluded from this that cancer is an illness that will affect everyone, either personally or in his/her direct surroundings. Demand for oncological care is on the rise around the world.

In 1952 the institute is established as the Ontario Cancer Institute by the government of Ontario. The hospital is officially opened in 1958 and christened the Princess Margaret Hospital (PMH), named after Her Royal Highness. At that point in time, an explicit choice is made to avoid the use of the word “cancer” in the name. In those days the diagnosis of cancer feels as a death sentence since it is difficult to treat. A reference to a cancer center would have led to confusion and disquiet amongst patients instead of generating a feeling of security. In 1996 the hospital moves to its current location on University Avenue, right in the middle of the largest concentration of academic hospitals in the country.⁵¹ Since then the combination

⁵⁰ <http://www.cancer.ca/~media/cancer.ca/CW/cancer%20information/cancer%20101/Canadian%20cancer%20statistics/canadian-cancer-statistics-2013-EN.pdf>.

⁵¹ <http://thepmcf.ca/Pages/AboutUs/PresidentsMessage.aspx>.

of medical research and education is in the roots and genes of the PMH and still provides guidance for the hospital. In 1998 the PMH becomes a part of the University Health Network (UHN) in Ontario; the oncology wards of both Toronto General Hospital and Toronto Western Hospital also merge with the PMH.⁵²

In 2012 PMCC receives its current name. Nowadays the subject of cancer is no longer taboo. The prognosis and treatment of this illness have improved drastically. PMCC is now the largest cancer center in Canada with 3000 employees serving more than 1000 patients each day in 2013. PMCC is one of the top five oncological hospitals in the world and is a leader in scientific publications. Once patients are diagnosed with cancer, they can expect to go through difficult and uncertain times. It is important that patients experience that they are not alone in this journey. Employees see themselves as innovators in oncological care, with the aim of providing optimum care and converting scientific research within oncology into daily practice. The values and qualities that guide the culture of the organization to realize the goals are: passion, dedication and providing care (“to care about care”). Not because it is your work, but because it is a calling; because good personal care for a patient is the *summum bonum* and in this manner can truly mean something in the life of someone else. In that regard, it concerns integrity and respect: every patient is unique within the hospital and has the right to respect and personalized care. When someone becomes seriously ill and his/her dependence increases, respect and self-esteem are vital. An equivalent collaboration between the patient and medical specialist based on autonomy must contribute to that end.

Scientific research must make innovation possible. An example thereof is stem cell transplantation, which originated in the laboratories of PMCC. Nowadays some 300 stem cell transplants are performed at PMCC on an annual basis. By combining care and scientific innovation, PMCC can provide its patients with the newest and most advanced therapy options. Almost one third of the patients within PMCC participate in a form of clinical research.⁵³ Collaboration and leadership are displayed by working together with partners and patients and by taking leadership in the field of oncological care worldwide. An example of this is the collaboration with Kenyan doctors in preventing and fighting gynecological forms of cancer, such as cervical cancer.⁵⁴

⁵²<http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Pages/pmh.aspx>.

⁵³<http://www.research-europe.com/index.php/2013/03/dr-benjamin-neel-director-ontario-cancer-institute-princess-margaret-cancer-centre/>.

⁵⁴http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Documents/PMHCP_AR_2012.pdf.

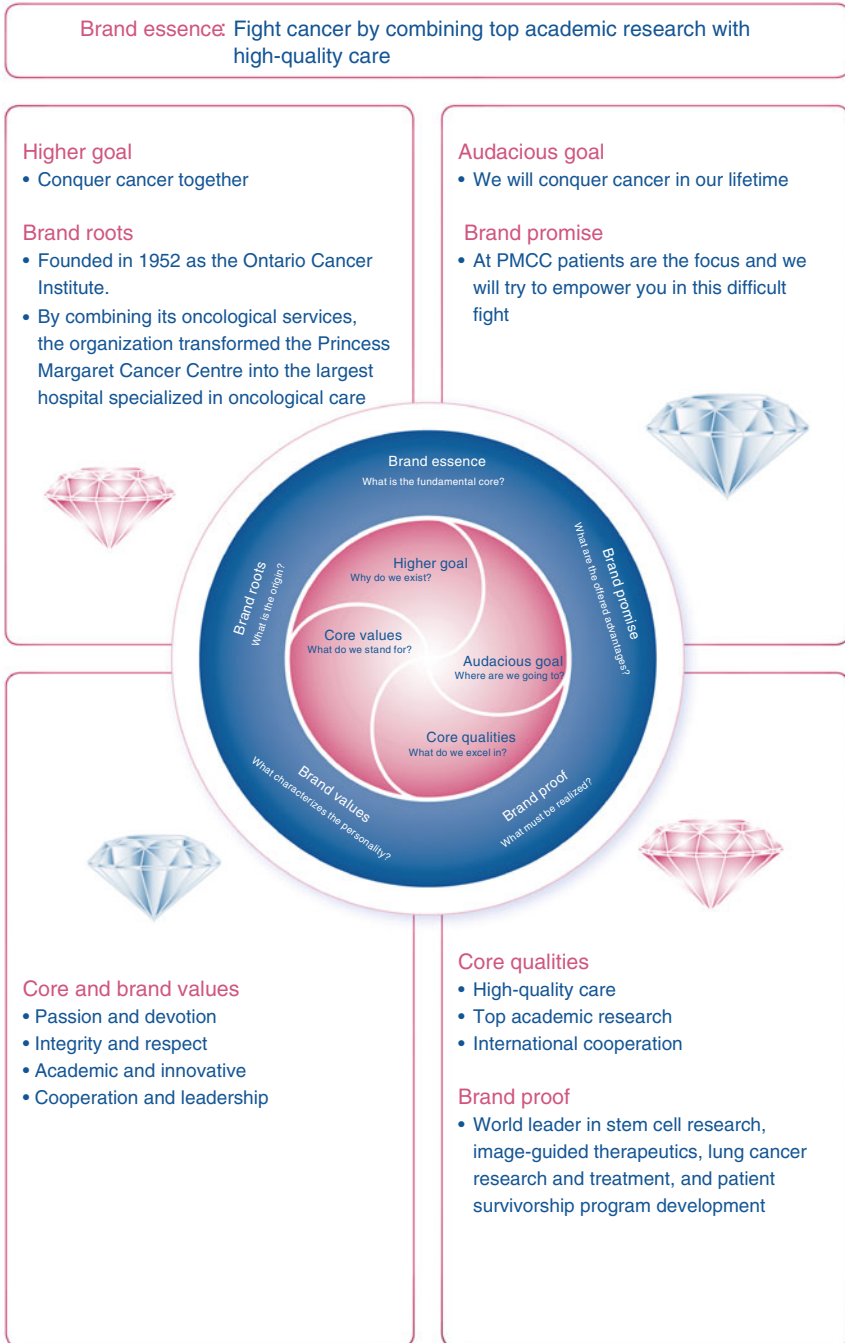


Figure 9.3.1 Vision and Positioning of PMCC

9.3.2 *The Business Model: Top Research in Practice*

“What we want is to give people tomorrow’s care. We’re not satisfied with what’s done today. We’re not trying to predict the future here, we’re creating the future.”

—Dr. Mary Gospodarowicz, CEO PMCC

Market Segments: Complex, Highly Specialized Oncological Care Canada is provincially organized which means that the position of the health insurer and the autonomy of hospitals can vary from province to province. With 26 specialized clinics and 17 radiotherapeutic accelerators, PMCC is one of the most extensive oncological treatment centers in the world and has the largest radiation therapy treatment center in Canada. The hospital is a global leader in treatments such as stem cell therapy and cancer research. It is also one of the top five oncological research hospitals in the world. With 398,000 m² devoted to research, PMCC makes major investments into fundamental, translational and clinical cancer research. This is conducted via two research centers which are affiliated with PMCC and contribute to the improvement of the diagnostics and the treatment of cancer. These centers are the Ontario Cancer Institute (OCI) and the Campbell Family Cancer Research Institute. This makes PMCC the largest hospital or research hospital in the field of cancer in Canada.⁵⁵

In 2012 the number of oncological patients in Canada was estimated at 186,400 relative to a population of 34.5 million.⁵⁶ PMCC is located in the Greater Toronto Area, a metropolitan area in the southeastern Ontario that is home to some six million inhabitants. Of all the cancer patients, 13,000 (some 27%) end up at PMCC (see also the table “Number of new patients in 2012”). Whereas several regional hospitals provide oncological care, PMCC is the only one which has specialized in this field. The patients that arrive at PMCC are the ones who need more complex, highly specialized care. The oncological hospital provides care that is divided into several areas of expertise: breast, central nervous systems, endocrine, gastrointestinal, urogenital, gynecology, head and neck, leukemia, lung, lymphoma, myeloma, and sarcoma. PMCC has more than 210 beds for clinical admission. The 3000 employees work in 26 clinics specialized in oncology where the 12 areas of expertise are housed. In 2012, 4047 operations took place, 31,022 chemotherapy treatments and 10,150 radiation therapy treatments plus 319 stem cell transplants.⁵⁷

⁵⁵ <http://thepmcf.ca/Pages/AboutUs/Top5.aspx>.

⁵⁶ <http://www.cancer.ca/~media/cancer.ca/CW/cancer%20information/cancer%20101/Canadian%20cancer%20statistics/Canadian-Cancer-Statistics-2012DOUBLEHYPHEN-English.pdf>.

⁵⁷ The figures and table 9.1 are based on http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Documents/PMHCP_AR_2012.pdf.

Table 9.1 Number of new patients in 2012

Disorder group		2012
Malignant	Gastrointestinal	1706
	Urogenital system	1654
	Breast	1525
	Gynecology	931
	Lung	877
	Head and neck	729
	Leukemia	666
	Lymphoma	527
	Thyroid gland	454
	Melanoma	403
	Sarcoma	321
	Central nervous system	243
	Eye (incl. melanomas and sarcomas)	145
	Other	812
Benign tumors		1825
Total tumors		12,818
Nonneoplastic		4309
Other		842
Total		17,999

Customer Value: Personalized Quality Patients come to PMCC for the combination of science and compassion in oncological healthcare. Oncological patients desire the best available care based on the latest scientific developments and personal attention in the difficult treatment process. From quick diagnosis to clinical trials, everything is used to give the patient the best personalized treatment as quickly as possible. Within this framework, patient empowerment is used so that people themselves can make choices and make their own contribution in the treatment process. Various programs exist for guiding patients in doing this. For instance, there are self-help programs and eHealth tools and patients themselves can also decide whether they want to participate in any clinical trials and, if so, which ones.

Important is that PMCC’s employees truly care about providing care and consequently want to make a difference for the patient. The aim in that regard is to discover cancer earlier, to treat it more precisely with as little damage as possible to surrounding tissue and to support the patient optimally. This holds true for both the time of the treatment process and the period afterwards. An example of this is rapid diagnosis in breast cancer research. If a suspicion exists that a patient has breast cancer, radiological research is performed and the result (with a possible biopsy) is known within 1 day. If cancer is identified, the patient will immediately be offered pointers for dealing with this diagnosis. For instance, a plan is drawn up with the patient to provide insight into the illness and give hope for the future. This approach offers more than just personalized care; it increases the patient’s level of self-reliance and control over the actual decisions in the treatment and the timing thereof. Patients wanting to obtain more in-depth information about the illness can find it in the library. Here they are given the opportunity to find out more about their own illness, which makes it easier for them to oversee their treatment process and take control themselves.

Quality of life is the determining factor for the setup of the process. PMCC claims that it provides good quality care, but it is difficult to measure this. Transparency in healthcare data appears not to be as developed in Canada as it is in other countries. So long-term results of treatments and provided care are not available, but might provide the opportunity for PMCC to pick this up and then really make their claims stick. For patients, the developments in scientific research and the expertise of top specialists engender trust in the care provided. Due to the many publications and PMCC's status as a leader in the field of cancer care, patients feel more confident about the treatment. So they prefer to be treated for cancer in PMCC.

"Thankfully, my cancer was diagnosed through the Gattuso Rapid Diagnostic Centre at Princess Margaret Cancer Centre. In my opinion, they saved my life. Their willingness to push the boundaries meant that my cancer was detected at an early stage. And their vast research, knowledge and expertise have given me both direction and hope as I navigated my way to a new normal life."

—Kate Mlodzik

Almost everyone is insured in the Canadian healthcare system, so patients need not be concerned as to whether they will be able to pay the bill or not. The lion's share of the population relies on the national healthcare insurer MediCare, which also pays for the care provided in PMCC. Medication is paid for via separate private health insurance that is taken out.^{58,59}

Delivery: Optimizing Learning and Hospitality Scientific performances are an important foundation for the organization's reputation. In 2012 PMCC published more than 930 articles.⁶⁰ It is therefore not without reason that in 2011 the hospital was ranked third of the top five institutions in the world with the most scientific articles in the field of cancer. Scientific evidence and the application in practice are known worldwide as progressive and innovative. Consequently, PMCC is becoming well known amongst scientific societies, healthcare practitioners and patients both in Canada and abroad. PMCC makes much use of patient experiences not only to improve its internal processes through feedback loops (e.g., patient satisfaction surveys), but also to use them in its external communications. For instance, the experiential accounts of patients are shared via various communication channels, for instance online and via communications of various funds. This makes a contribution at a number of levels: it helps in society's fight against cancer and raises awareness about cancer; it creates clarity and trust for patients; and it serves as a nice spin-off for the positioning of PMCC. The delivery of personal and patient-focused care is realized by its employees. Every patient is assisted by a team consisting of a specialist, an outpatient nurse and an administrative employee. The patient is at the center of attention and every team member uses his/her own expertise to support the patient. The staff emotionally and often literally stand at the patient's side and will support him/her throughout the entire treatment process. Attention is paid to the medical aspect of the care provided, but also to the process, the emotion as well as the physical conse-

⁵⁸ <http://www.emigratie.nl/cmsweb/canada/gezondheidszorg.html>.

⁵⁹ http://thepmcf.ca/pmhonlinereport2011/?utm_source=PMCP&utm_medium=web&utm_campaign=PMCP%2BWeb.

⁶⁰ http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Documents/PMHCP_AR_2012.pdf.

quences for the patient in question. Thanks to the powerful image of PMCC as a top academic center, influenced in part by the Princess Margaret Cancer Foundation and its benefit activities and campaigns, PMCC is a major attraction for motivated staff. PMCC treats only patients with cancer and employees often also consciously choose PMCC because of its involvement in fighting this illness. PMCC is truly a societal organization within the framework of realizing the goal it has set itself, which in turn results in the degree of involvement of its employees.

Aside from curative care, services are offered to stimulate current and former patients to feel better about themselves and to gain strength. For instance, there is a program called “Look Good, Feel Better,” which focuses on personal care, appearance, and hair style. In addition, there are support programs and groups where the patient can receive peer support. There are also financial programs that offer help in arranging an income and healthcare or other insurance. Other services, for instance, are the health services, including dental care, mental care and dieticians. There is also help for ethical issues and spiritual care is also offered. The aim of all these programs is to provide support for current and former patients in dealing with their illness. To provide them with further support in dealing with the consequences of their treatment, there are special clinics for side-effects, such as the Cancer Pain Clinic, the Lymphedema Clinic, and the Mt. Sinai Centre for Fertility & Reproductive Health.⁶¹

Since Canada is a country with large thinly populated areas, the service area of hospitals like PMCC is many times greater than in densely populated countries. Distance is consequently a barrier for patients. In order to overcome the distances and to realize cooperation between hospitals, TeleHealth (or Telemedicine) is used.⁶² This technology makes video conferencing within the Ontario region possible. It enables contact with patients without them having to travel great distances. Further, it offers top remote clinical care in conjunction with the doctor in the local hospital. This often occurs in cooperation with the doctor or specialized nurse, so that any physical examination can be performed immediately. If the patient has to be treated in Toronto, TeleHealth provides the opportunity to stay in touch with family members far away. Each year more than 3000 patients make use of this TeleHealth network.⁶³

Operation: Knowledge and Expertise for Many People Across Great Distances The concentrated expertise and treatments at PMCC enable the use of the most advanced techniques and equipment for existing and new therapies. Examples of this include hyper-sensitive CT scans but also a robot acting as a doctor. The latter might sound somewhat futuristic, but this is a reality at PMCC. This is where the Robotic IV Automation (RIVA) is used to determine the right chemical composition for chemotherapy. Previously 2000 intravenous doses were prepared by hand each day; now this process is fully automated with RIVA, resulting in greater efficiency and improved medication safety. PMCC is the first hospital in Canada where this robotic technology is used.

Robots are deployed not only for chemotherapy, but also for surgical procedures. For instance, PMCC was the first hospital in Canada to employ robot-assisted surgery

⁶¹<http://www.theprincessmargaret.ca/en/patientsfamilies/supportservices/pages/support-services.aspx>.

⁶²<http://otn.ca/en/about-us>.

⁶³http://www.uhn.ca/PatientsFamilies/Patient_Services/Telehealth.

for lung cancer. This pioneering work also resulted in fewer complications and a quicker recovery.⁶⁴ In addition, the robot is used for minor invasive surgery in a variety of cancers, including rectal cancer. Thanks to this technology, the patient has a reduced chance of developing complications because procedures can be performed more precisely. The result is that the recovery period is shorter. In addition, PMCC has among other things 17 radiation therapy devices and is a leader in innovative research using the latest technology, such as deep brain stimulation or stem cell research.

Collaboration is of vital importance for sharing expertise. That is why PMCC is affiliated with the Cancer Care Ontario (CCO), a governmental agency with a network of 14 cancer centers in Ontario. CCO provides quality and continuous improvement in the delivery of and access to oncological care in the province. Nonetheless, the centers involved in the network still operate independently of one another. Although there is some form of consultation intensive collaboration is (still) not a reality. In other words, there is still a chance and a challenge to optimize this aspect and to increase the quality of the care provided.

PMCC is part of the University Health Network (UHN). The collaboration between hospitals in the UHN is used to help patients better in both care and services.⁶⁵ Ultimately, the aim is to optimize available equipment and specialization in the hospitals to ensure better healthcare at lower costs. For instance, the neuro-oncology unit was transferred to Toronto Western Hospital, while the surgical oncology unit moved to Toronto General Hospital.⁶⁶ As a result, specialization becomes affordable, quality increases, and costs decline.

The UHN also has an international patients program. Through this program, individuals from the entire world can take advantage of the knowledge and care in PMCC. This is possible if the care required is not available in the land of origin, in special circumstances or if a patient has friends or family who live in Toronto. For foreign patients, a quotation is drawn up based on the patient data and the estimated costs. These costs must be paid by the health insurer or by the patient himself/herself.^{67,68}

At the international level, work is carried out in intensive collaboration as well. For instance, there are alliances with institutes and programs such as Yale University, OncoRay in Dresden, Liverpool Hospital, and the Cancer Control Centre. International collaboration is also aimed at bringing knowledge into practice. In Kenya, for instance, expertise is being leveraged to set up screening programs for cervical cancer in collaboration with the Moi University School of Medicine and the Moi Teaching and Referral Hospital (MTRH). As a result, women in Kenya can be treated in a timely manner, preventing deaths resulting from cervical cancer. From 2008 to 2012 alone, more than 60 women's lives were saved by this program!⁶⁹ It is expected that in 2013 more than 14,000 women will be screened.

⁶⁴ http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Documents/PMHCP_AR_2012.pdf.

⁶⁵ http://www.uhn.ca/corporate/AboutUHN/Pages/about_us.aspx.

⁶⁶ http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Documents/PMHCP_AR_2012.pdf.

⁶⁷ <http://www.theprincessmargaret.ca/en/PatientsFamilies/Guide/Pages/How-Do-I-Get-Referred.aspx#HowLong>.

⁶⁸ <http://www.uhn.ca/IHP/IPP/Pages/default.aspx>.

⁶⁹ http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Documents/PMHCP_AR_2012.pdf.

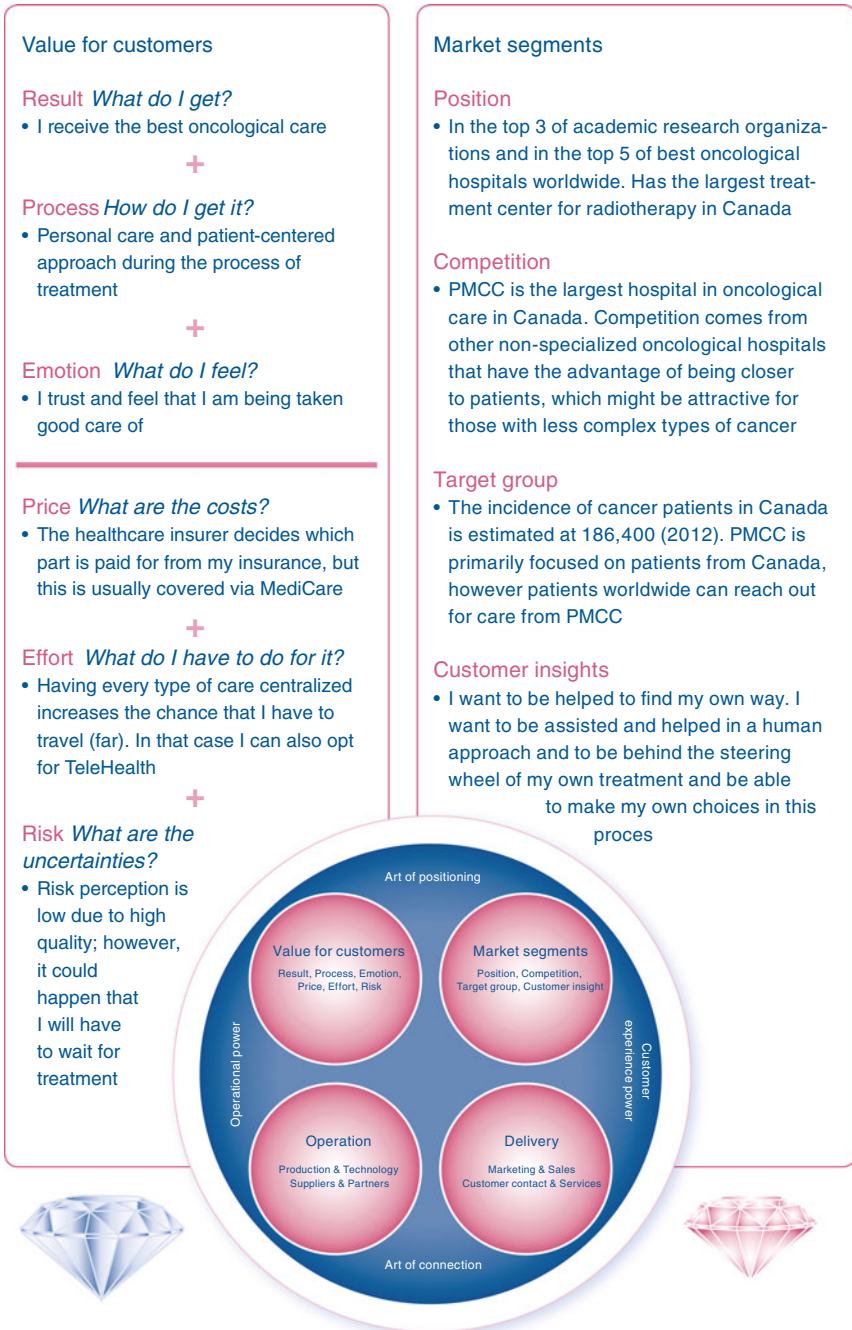


Figure 9.3.2 Value for customers and Market segments of PMCC

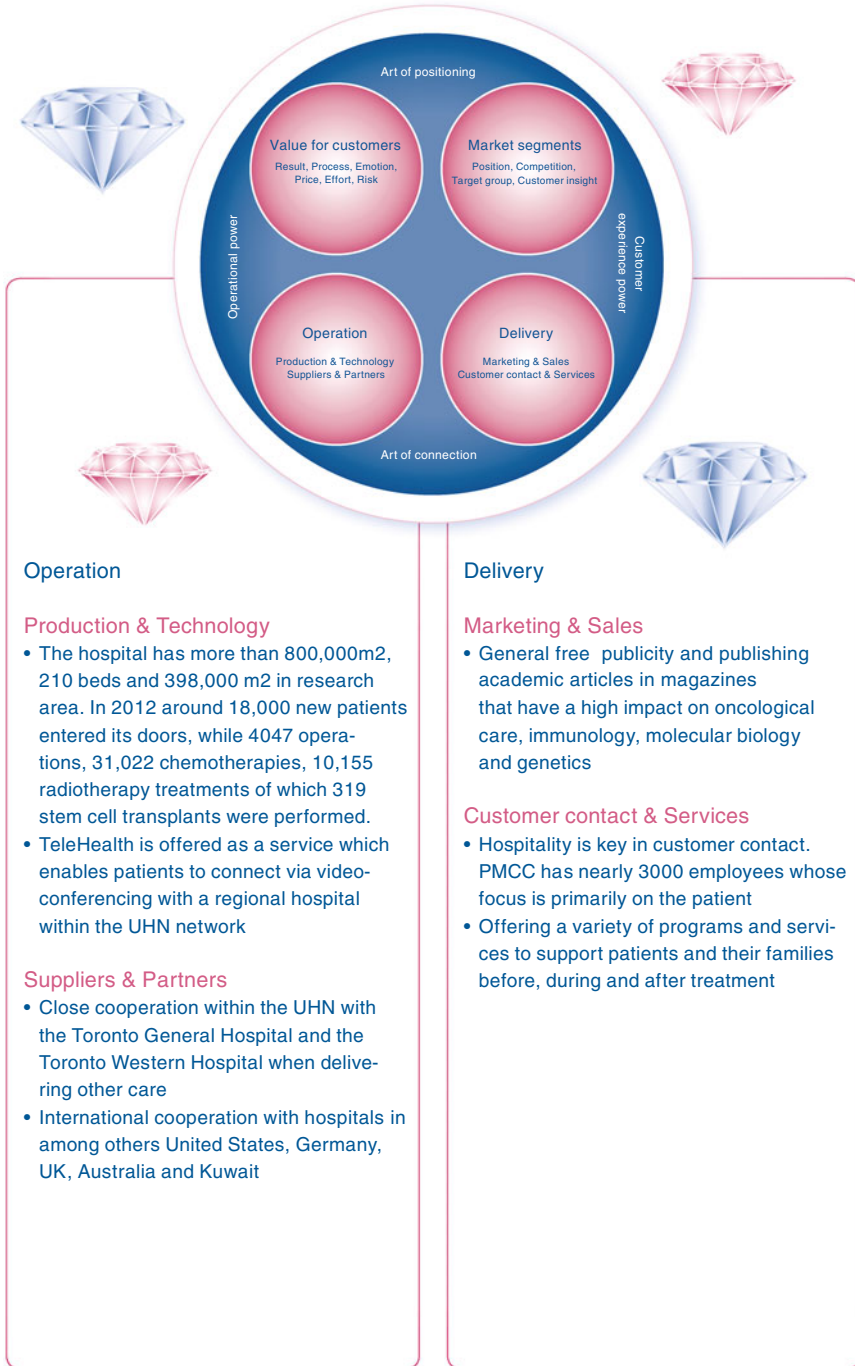


Figure 9.3.3 Operation and Delivery of PMCC

9.3.3 *Result: What Is the Impact of Dedication Towards Science and the Patient?*

Now it is clear how the business model works, it is of course worthwhile to look at what this yields. What value is realized for and by customers, employees, and shareholders, and what result does this yield society?

In a hospital where the focus is on the patient and where the vision “conquering cancer in our lifetime” is the leitmotiv, it is not surprising that the focus is on treating the patient to the best of their ability. The scientific orientation makes it distinctive. A clear example of value for and by customers is the clinical trials, the last step in lab research before implementation in daily practice. In that regard, a new treatment, medication or improved care process is tested in real life. PMCC provides various clinical trials aimed at prevention, diagnostics, cancer treatment, and quality of life. In consultation with the attending physician, patients can choose to participate in this process. The value for patients by opting for the process is that they in every case receive the care—and perhaps even better or quicker. Through participation, they additionally help to bring the research into practice and to make a contribution in the fight against cancer.^{70,71}

Patients share their experiences with PMCC to optimize processes and treatments. In this way, a greater sense of community arises, where patients come into contact with one another and exchange experiences. Qualitatively speaking, patient experiences are also made comprehensible, such as on the website of the Canadian Broadcasting Corporation (CBC). This is an independent website where patients can rate more than 132 hospitals based on a number of factors. These factors include: respect, communication, availability, hygiene and recommendations. In the spring of 2013, more than 230 patients entered their reviews, with PMCC scoring 4.5 on a scale of 1–5. That was more than a full point higher than the average of 3.5 for customer experiences at the other Canadian hospitals.⁷²

The Canadian healthcare system is financed by federal and provincial taxes. Provincial governments are responsible for the set up and execution of healthcare.^{73,74} This makes PMCC a semipublic care institution that is financed by the Province of Ontario and by the Princess Margaret Cancer Foundation (PMCF).⁷⁵ PMCF is the fund that financially supports PMCC in its cancer research. In 2012 that financial support amounted to CAD 84.2 million (USD 70.3 million or EUR 63 million at the time of writing). Of this amount, some 81 % was spent on research, clinical care,

⁷⁰ <http://www.theprincessmargaret.ca/en/PatientsFamilies/library/AboutClinicalTrials/Pages/what-are-clinical-trials.aspx>.

⁷¹ http://www.uhn.ca/docs/HealthInfo/Shared%20Documents/Clinical_Trials_at_PMH.pdf.

⁷² <http://www.cbc.ca/news/health/features/ratemyhospital/profiles/princess-margaret-university-health-network/>.

⁷³ <http://www.justlanded.com/nederlands/Canada/Canada-Gids/Gezondheid/De-gezondheidszorg>.

⁷⁴ <http://www.canadian-healthcare.org/page8.html>.

⁷⁵ <http://www.canadian-healthcare.org/page8.html>.

and training; 7% on buildings and materials; 10% on administration and additional fundraising; and 2% set aside as a contribution to a financially sound continued existence of the Foundation.

In 2013 PMCF launches a new “Believe It” campaign, with the aim of generating CAD 500 million (USD 417 million or EUR 375 million) for research into personalized cancer medicine.⁷⁶ PMCF is a nonprofit organization which is dedicated to raising funds to realize its audacious goal and consequently to conquer cancer.⁷⁷ The Foundation organizes various fundraising activities. By far most of the money comes in via lotteries (41%). Hundreds of thousands of people buy a ticket for these lotteries, hoping to win a prize (a fully furnished home or apartment).⁷⁸ In addition, sport events or sport sponsor events are organized.

In 2012 the UHN as a whole is ranked as the best of the top 40 research hospitals in Canada. UHN has also repeatedly figured in the list of Canada’s Top 100 Employers, an annual survey of more than 75,000 Canadian employers. Employers are assessed based on: physical workplace, working atmosphere, family benefits, financial aspects, health, holiday opportunities, communication, trainings and courses.⁷⁹ The UHN motivates employees in their personal development, pays well and provides good employee benefits and secondary work conditions⁸⁰ In that regard, the value that it creates for the employees is returned to the organization in the form of compassion and personal attention for the patients. It is with dedication and compassion that doctors and nurses ensure that they get the most out of the situation. Employees have brought back true personal care by way of the respect and integrity that they show in their work with the patient. The dedication and contribution of the people who work at PMCC are a clear example of the UHN philosophy and show how this works in practice.

Through its societal vision “fighting and wanting to conquer cancer,” PMCC makes a direct contribution to value for society. The research projects and publications contribute to the national and international sharing and consequently increasing of knowledge. Integrating research into the daily practice produces a health profit for patients and increases the quality of life through the fight against the illness. In addition, the vision makes a contribution at the societal level by raising the awareness of cancer. This happens, among other things, by fundraising via societal campaigns and by properly informing patients and parties concerned about the illness and the role that they themselves can play during and after the treatment process. The hospital is transparent in its business and its strategy. Reports, such as annual reports, but also strategy plans are accessible to the public. This ensures that the goals of PMCC are open and tangible, so that people also develop and maintain trust in the organization.

⁷⁶http://www.uhn.ca/corporate/AboutUHN/OurHospitals/Documents/PMHCP_AR_2012.pdf.

⁷⁷<http://thepmcf.ca/Pages/DonorImpact/>.

⁷⁸<http://www.blogpmhf.ca/Blog/PMHF-Blog/April-2011/Lotteries-and-Selling-Out-By-Early-Bird.aspx>.

⁷⁹<http://www.canadastop100.com/national/>.

⁸⁰http://www.uhn.ca/corporate/Careers/Pages/who_we_are.aspx.

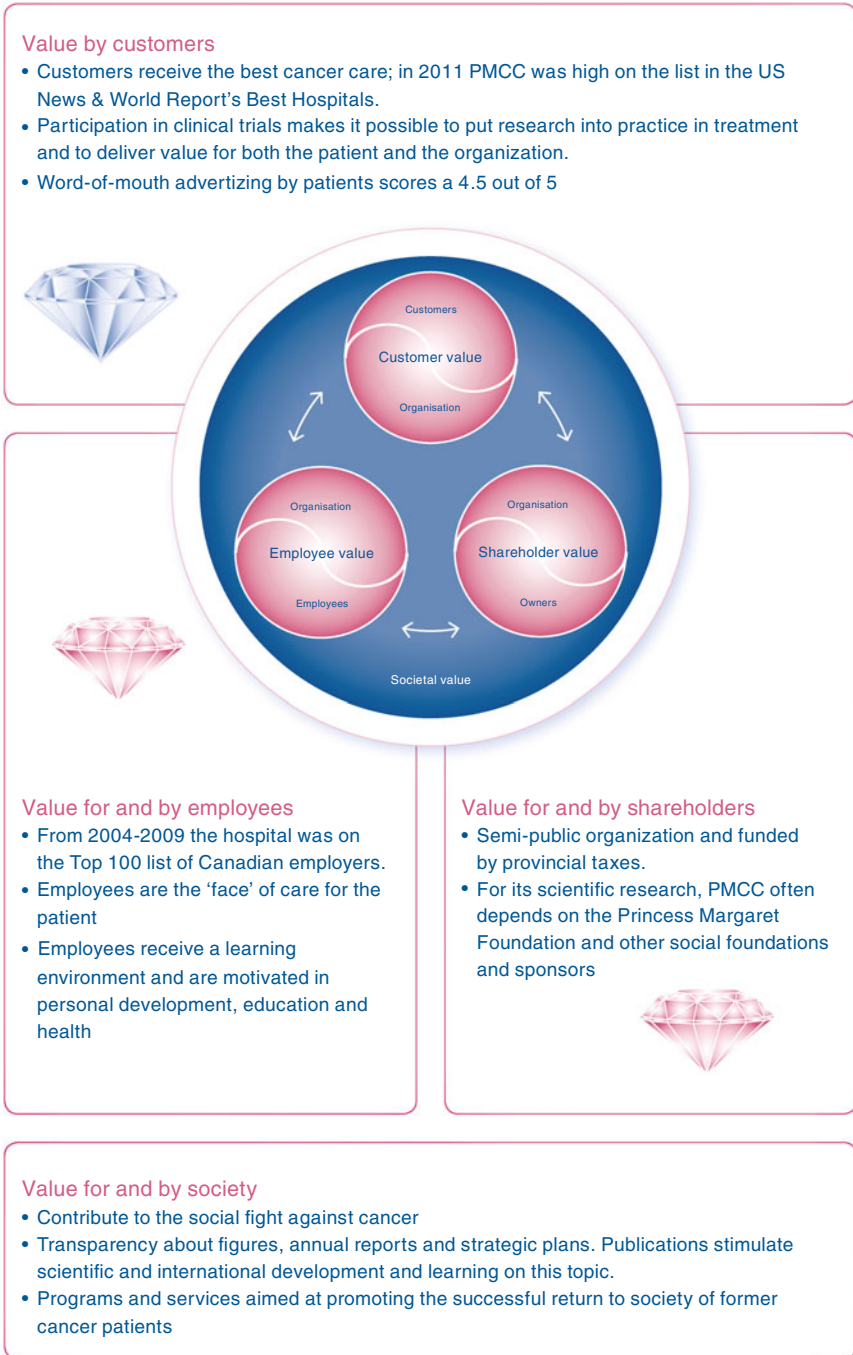


Figure 9.3.4 Value for and by stakeholders of PMCC

9.3.4 *The Brilliant Lessons of Princess Margaret Cancer Centre*

The Princess Margaret Cancer Centre is a diamond in oncological care, a hospital that provides huge volumes of oncological care in a massive area. What can we learn from PMCC's example?

- The bundling and literal proximity of science and care contribute to the quick and efficient ability to use and implement new methods and technology. At the same time, clinical trials provide science with feedback for research and accelerate it. This results in the continuous combination of innovative, complex scientific research with daily patient care.
- Attention for patients and enabling them to make choices in their own treatment process (patient empowerment) results in self-confidence. Together with initiatives like the Patient Navigation Program, this prompts patients to take charge of the process themselves and enable them to take the lead in their own fight to conquer cancer.
- PMCC has one main location from which a much larger service area is covered than usual in the generally densely populated Western countries in Europe and the East and West coasts of the USA. In order to provide specialized care for more than just the people who are physically in the hospital, TeleHealth is used, which prevents the relevant patient from having to spend unnecessary time travelling. TeleHealth is supported by a doctor in his/her local hospital, yet patients receive the treatment they need in this way. The benefits of TeleHealth are greater convenience, a lower threshold and lower costs. The circumstances have stimulated PMCC to be a frontrunner in this perspective and this now delivers best practices that are also valuable for supporting focus and cooperation in more densely populated areas.
- The financial model, with the Foundation behind the organization, contributes to both societal involvement and the stability of the organization. The mission "We will conquer cancer in our lifetime" and the campaign "Believe It!" generate a lot of publicity, while financing is arranged for further development. The mission is a major attraction for patients and employees, making the care provided societal and more personal. In addition, it attracts employees with passion and dedication.

9.4 Mayo Clinic

The highest quality care organized around you

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Prelude *Imagine that you are diagnosed with a very unpleasant, serious illness. You have to be admitted to a hospital. At that point a number of questions naturally come to mind: “What am I going to have to go through in the near term? Will I go to a large hospital? If so, will I just be treated like a number? Will I see that specialist ever again after I have been admitted? Or will he send his co-assistant? And what will happen if the medication doesn’t work? Do they have a fall-back option for that eventuality?” In that case, you will want to go to a hospital where they provide you with answers to those questions and where the best doctors work together with the best researchers and the best scientists. More than a century ago, in 1889, one man laid the foundation for that type of hospital: Dr. William Mayo started the Mayo Clinic.*

Mayo Clinic is the most prominent hospital in the world. Integrated care was invented here. Prior to even entering the hospital building, you have been informed about the procedures that await you. The doctor who receives you will act as your coach to guide you through the healing process in the hospital. For decades, Mayo Clinic has enjoyed the status of a leading hospital and in that regard is the place where many physicians and scientists would like to work. This demands a lot of them though. Working at Mayo Clinic is only for those who are able to place patients and their care process at the center of attention—at the expense of everything else including themselves. That patients value this approach is evident from, among other things, the impressive fact that Mayo Clinic receives an average of 750 gifts from patients every day. In 2014 that amounted to gifts worth USD 288 million (EUR 259 million)—funds that, needless to say, are reinvested in healthcare by Mayo Clinic.

Introduction Mayo Clinic is a nonprofit medical assistance and research group based in Rochester, Minnesota, USA. It employs more than 4200 doctors and researchers, 2400 fellows and residents, while some 52,900 employees work in the total network of integrated care. It specializes in the integrated diagnosis and treatment of medically specialized care for both regular care and highly complex care. In 2012 in excess of USD 923 million (EUR 831 million) was spent on research and more than 1.5 million patients were cared for worldwide.

Mayo Clinic has been ranked as one of the top hospitals in America for years; it has even topped the list for specialized fields like gynecology and diabetes care. In 2014, no fewer than 15 specializations of Mayo Clinic were ranked in the top 10 by the US News & World Report. In addition, the group has been in the list of the 100 best businesses to work for years already. These are fantastic results, but what are the roots of this success?

In order to obtain a proper understanding of the success of Mayo Clinic, it is vital to look at its origins. On 21 August 1883, a major tornado roars through the city of Rochester, leaving 40 dead and 200 injured in its wake. At that time the city does not have a hospital and the injured cannot be transported elsewhere. Dr. William Mayo, a member of a leading family of doctors in the city, takes on the task of providing care for them. Since there is no hospital in Rochester at the time, care is provided in a makeshift hospital set up in a dance hall. At the request of the local Mother Superior, Dr. Mayo takes the initiative to set up his own hospital in the city. On 30 September 1889, Saint Mary's Hospital is opened.

It is in this hospital that innovative healthcare and the pioneering spirit continues which Dr. Mayo was already pursuing in his own medical practice together with his two sons. The integration of care, the combination of care with science and research, and placing the patient at the center of attention turn this hospital into a leader in American healthcare in a short period of time. Crucial to this development is the decision in 1919 to turn Mayo Clinic into a not-for-profit organization, whereby the partner structure is terminated and the doctors and researchers become employees. The integrated approach and deeply rooted perspective, also in financial terms, that people can do more for the patient together, is still the focus of the business model of Mayo Clinic after more than 125 years. All this is reason enough to investigate this brilliant business model in further detail.

9.4.1 The Cornerstone: “The Needs of the Patient Come First”

“The sum total of medical knowledge is now so great and wide-spreading that it would be futile for any one man ... to assume that he has even a working knowledge of any part of the whole ... The best interest of the patient is the only interest to be considered, and in order that the sick may have the benefit of advancing knowledge, union of forces is necessary ... It has become necessary to develop medicine as a cooperative science; the clinician, the specialist, and the laboratory workers uniting for the good of the patient, each assisting in elucidation of the problem at hand, and each dependent upon the other for support.”

—William J. Mayo, 1910

“Patients first” has become a popular saying of many healthcare practitioners. Putting the “patient first” is nonetheless a goal that in most cases has not yet been fully realized. At Mayo Clinic it has, and right from its inception. The brand essence is therefore “Patients first!” i.e., everything is done for the patient. From the very beginning in his own general medicine practice, Dr. William May sees his role as a doctor as a supporting one. Placing patients at the center of attention and making them better is what it is all about. It is with this vision and this guiding principle that Saint Mary’s Hospital, the predecessor to Mayo Clinic, is established. It is a hospital that the patient enters to become better; everything is done to realize that goal. And if it is better possible to do so by integrating healthcare more effectively, then so be it. If good research and the linking of science to medical specialists produces good results, then good scientists and researchers are needed in the hospital. And in order to optimize this process, these people will have to be able to work together on the patient, and so Mayo Clinic develops an integrated patient file as early as 1907.

Just prior to that, in 1906, Mayo Clinic also sets up the Surgeons Club. There, specialists are invited to come to Rochester to share knowledge and to learn from each other. It is, in fact, one of the first open platforms for cocreation and innovation, a concept that has only really been further developed in the past few years.

Mayo Clinic desires to create hope and make a contribution to health and the welfare of people around the world. That is its higher goal. It requires not only the best care for the patient, but also the best in terms of the patient’s experience and in hospital procedures. From the outset, Mayo Clinic has implemented integrated diagnoses and has organized treatments around the patient as well as being a leader in Research & Development. The goal that Mayo Clinic continuously pursues is the best care for every patient by coordinating medical research, practical experience, and learning processes. It is not uncommon for patients to be seeing one specialist after another for up to a year or more, and still not knowing what is wrong with them. At Mayo Clinic everything is done to prevent that and to make the right diagnosis immediately. Even if that demands that eight top specialists have to work together to discover what it is. That is invaluable in a world where getting the diagnosis right quickly, seems to become more difficult and requires a high degree of skill and intuition based on experience and knowledge.⁸¹

The promise is: everything for you as a patient and for your family. This means the best doctors — not just in terms of medical expertise, but also in the contact with you as a patient. Central to that business operation is: compassion, integrity, excellence and teamwork. Compassion is needed for and with the patient and the people directly involved with the patients. The highest possible level of professionalism, ethics and personal responsibility is pursued in all processes when it comes to integrity. And a drive for excellence is needed for the patient. The conviction is that only those that work in a team based on equality, can achieve all this.

⁸¹The importance of diagnosis and the added value of Mayo in this field is discussed, for instance, in Christensen et al. (2009).

Mayo Clinic has a number of distinctive core qualities that together with the core values create a way of working that makes it possible to organize this top-quality care for their patients. These core qualities are excellence, innovation and continuous improvement. Excellence in care is the guiding principle in all processes in the hospital: “Whatever we do, we do well.” Innovation is used among other things by employing the creative ideas and unique talents of employees to maximum effect. This leads to continuous improved processes and services to heal the patient. It simultaneously contributes to keeping the organization and the spirit alive and energetic. The experience of employees and patients are sought out and shared, forming the starting point for improvement building upon stewardship to optimize the use of scarce resources. The proof that the organization has for these efforts comes in the form of satisfied patients, happy employees and top-quality care, highlighted by no less than 12 (!) top three rankings in the Best Hospitals in the USA 2014 among a total of 16 care specializations that were reviewed.⁸²

Guaranteeing that the entire organization places the patient at the center of attention demands true dedication. For Mayo Clinic, it is clear that this is only possible if all employees are selected based on their ability to empathize. This is a tough selection criterion for all staff—doctors, specialists, nurses, researchers and scientists. It also plays a role in the selection of potential students of Mayo Clinic’s training institute. They are also tested for their empathy levels ensuring that the organization’s vision is present even before they commence their training courses.

⁸²<http://health.usnews.com/best-hospitals/rankings>.

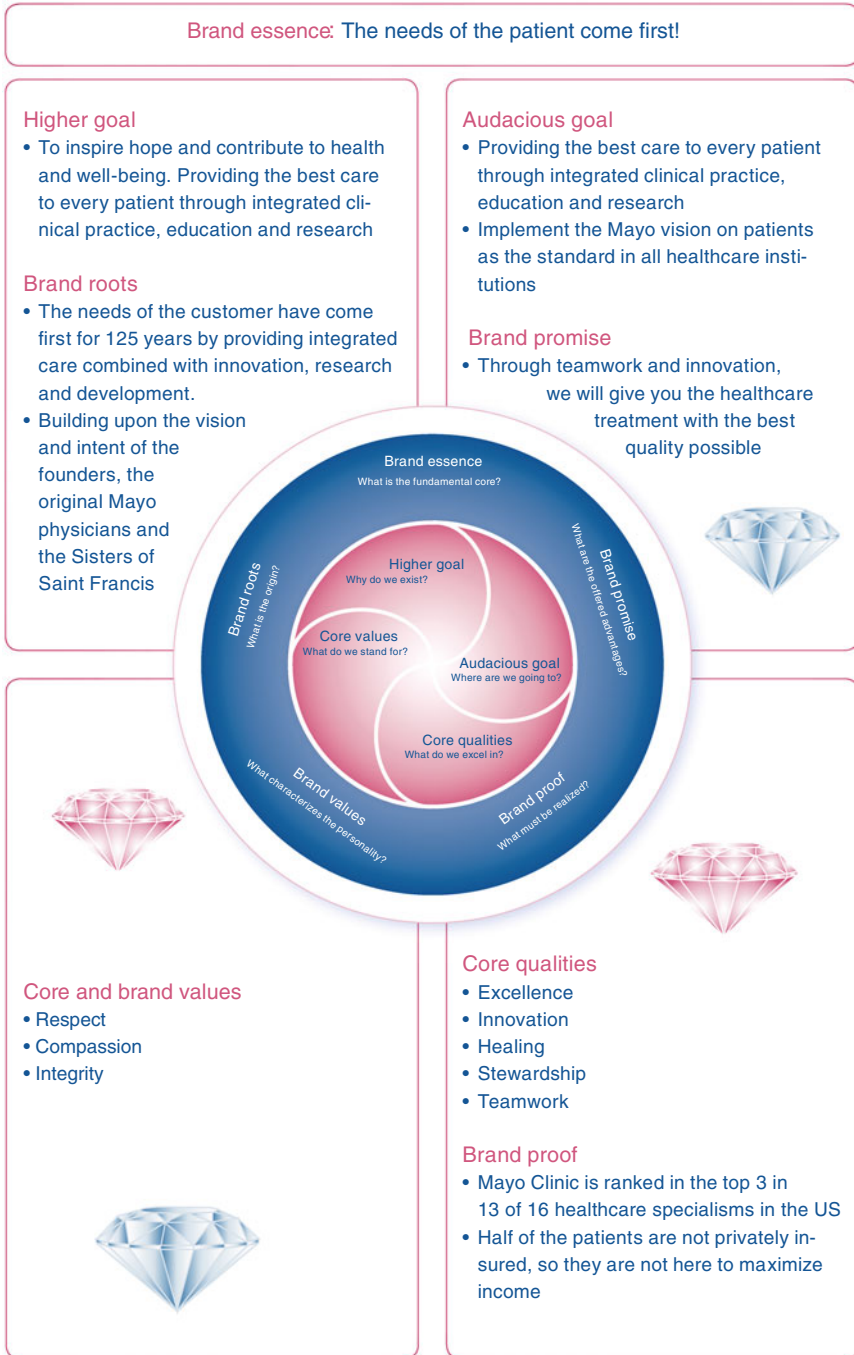


Figure 9.4.1 Vision and Positioning of Mayo Clinic

9.4.2 The Business Model: “Care Should Be Available for Everyone”

Market Segments: Everyone Who Requires Care Since 1919 Mayo Clinic has developed into an enormous care business with three fully owned hospitals in America. Rochester, Minnesota is home to the largest hospital with 1132 beds, more than 62,400 annual admissions plus 51,000 operations and more than 225,000 outpatient treatments (2012). Jacksonville, Florida provides 214 beds, admits more than 12,000 people annually and performs more than 6000 operations and in excess of 45,000 outpatient treatments (2012). And finally Scottsdale/Phoenix, Arizona offers 244 beds, also has slightly more than 12,000 annual admissions, completes almost 5500 operations and carries out just under 40,000 outpatient treatments (2012).

Besides Mayo Clinic’s own hospitals, Mayo Clinic Health System is a network of over 70 clinics, hospitals and healthcare facilities in Minnesota, Iowa, Georgia and Wisconsin. All in all, Mayo Clinic has an unbelievably large reach: in 2014 more than 1.3 million patients were seen. Further, Mayo Clinic also takes its role as a trainer of healthcare practitioners seriously, having set up five of its own training institutes: Mayo Medical School, Mayo Graduate School of Medical education, Mayo Graduate School, Mayo Graduate School of Health Sciences and Mayo School of Continuous Professional Development.

In 2014 Mayo Clinic had an annual turnover in excess of USD 9.7 billion (EUR 8.7 billion). Revenues are derived largely from contracts with insurers that procure care services for their insured customers. Mayo Clinic also generates income from care that is insured by the government through programs such as Medicare. Further, Mayo Clinic receives a lot of income from external funds, gifts and bequests. In 2014, bequests alone accounted for USD 103.9 million (EUR 93.5 million). From the very beginning, Mayo Clinic has been a very solid financial entity. Since everyone is an employee with a fixed salary, squabbling about volumes, bonuses or other financial stimuli is absent. In this way, the focus remains on Mayo Clinic’s goal to have a patient-oriented organization that does everything in the interest of the patient and is not tempted in any way, by financial motives.

As far as integrated care is concerned, Kaiser Permanente can be seen as a large “competitor” despite the fact that they are actually not a hospital, but a health insurer using healthcare practitioners in their network. The hospital competitors of Mayo Clinic are in particular the other large private care institutions such as Cleveland Clinic, which in 2014 had a turnover of USD 6.4 billion (EUR 5.8 billion) and has 39,100 employees, MD Anderson Cancer Center which in 2012 had a turnover of USD 4.4 billion (EUR 4 billion) and more than 20,000 employees, whilst Johns Hopkins Medicine had a turnover of USD 7.7 billion (EUR 6.9 billion) and 41,000 employees. All these hospitals invest enormous sums in their facilities, training programs and knowledge, yet for the time being none of them is getting the broad acknowledgements that Mayo Clinic is receiving.

When looking at how the organization positions itself, you might get the impression that Mayo Clinic is an exclusive and expensive hospital. That perception is mainly derived from its “premium” brand image. But Mayo Clinic is in fact certainly not only available for privately insured individuals which would also not

match its not-for-profit roots. In fact, Mayo Clinic delivers some 50% of its paid medical care to patients of Medicare or similar government programs. In 2014 Mayo Clinic delivered an additional sum exceeding USD 385 million (EUR 346 million) in care that went unpaid via programs such as Medicare, Medicaid, or care-specific services for senior citizens. And people in distress who do not qualify for one of the government's programs can rely on a safety net in the Mayo support fund that paid out USD 75.9 million (EUR 68 million) in 2014.

Customer Value: Knowing What You Are Facing Patients entering Mayo Clinic know that they are in good hands. They are properly informed and know what awaits them. Right from the intake interview, all processes focus on ensuring that the patient concentrates only on one thing: getting better. This gives patients a feeling of trust: they know that everything is being done to make them better. Patients are helped by doctors and nurses who work in equal, multidisciplinary teams. The doctors and nurses are on their side and consult with the patient as equals. This plays to the strength of patients, so that they are able to take control of their own healing process. Unlike any other hospital, Mayo Clinic has really integrated care which goes beyond bringing the various elements in chronic care together (e.g., for diabetes), but includes involving scientists and researchers in the actual recovery process. That means that the latest knowledge, technology, and options are available for the patients.

Delivery: Care Literally Organized Around You The vision that is embedded in the roots of the organization forms the guiding principle in its brand management. Mayo Clinic was one of the first hospitals that hired marketers to position the hospital in the healthcare market. By now the organization is well known for its ability to integrate social media and the use of apps in their marketing strategy. This market and marketing strategy is aimed at potential patients to make sure the “patient first” approach is clear to them, but also for fundraising. Fundraising is an important part of the revenues of Mayo Clinic and this is where it cashes in on their positioning.

For customers, the entire experience is so positive that they “gladly” come back in the unfortunate event that something is again wrong with them. As previously outlined, it is clear from the moment the diagnosis is made which care procedure lays ahead. The first specialist that sees the patient will act as his/her coach throughout the whole process. At the patient's bedside are not only a co-assistant and a nurse, but also an entire team of care professionals, including a medical specialist, a scientist, and a researcher. All disciplines that are important for healing the patient join forces and together with the patient take up the fight against the illness. The specialist, the scientist and the researcher truly work together to make the patient better, whereby their knowledge is combined, and egos and/or hierarchy are left at the door. Patients never receive a “standard” form of care from their nurse, but rather the care they—with his/her particular illness at a certain phase—require. Everything—and by that we mean everything—is done for the benefit of the patient. In other words, no one is preoccupied with side issues; but everyone is focused on their job at hand. The feedback and problems of patients are taken seriously and often result in a modification of the healing process.

Operation: Striving for the Best for the Patient Delivering the best care for patients means that all processes must be continuously in order and investments in quality and reliability must be measured. If everyone in the organization is truly focused on

this, things can only get better. The medical knowledge and involvement is visible everywhere in the organization. Such as the fact that the CEO is always a doctor from Mayo Clinic itself. Not a director, not a management executive, but someone who himself or herself has stood at the bedside of patients. Incidentally, that also applies to the Supervisory Board, whose members are all physicians. The fact that management is in the hands of doctors ensures that everything is reviewed through the eyes of a physician and therefore contributes to what the patient finds important. In order to keep management on their toes and to prevent any routine for arising, as well as to provide an incentive to improve care, unit heads are appointed for only 4-year terms. After this term has expired, someone else must take over.

Mayo Clinic has a multidisciplinary approach that focuses on equality. Everyone is employed by Mayo Clinic and this is underlined in the remuneration scheme. As hierarchy or financial incentives do not play a role, the mutual trust amongst employees is enhanced, teamwork proceeds more smoothly and the focus on the patient intensifies. Needless to say, Mayo Clinic disposes of the most advanced equipment, but they are also quickly modified if doing so benefits the process or the quality of the care provided. For instance, Mayo Clinic employees themselves developed the YES board—a large monitor that integrates important patient data in the accident and emergency department rooms, which is used to quickly assemble a complete picture of the situation. It is yet another innovation by which everyone can focus better on what he/she has to do for the patient and not spend precious time on boundary conditions.

Mayo Clinic is one of the few hospitals in the world with several of its own innovation departments, such as Patients Experience and Design and the Center for Innovation. The first one deals with the experience of patients during their stay in Mayo Clinic. Thanks to the use of art, furniture and upholstery, Mayo Clinic emphasizes its vision on healthcare. For instance, by using posters, they literally show the difference between a patient file from 1907 and how it is today. Which shows that healthcare changes, but the vision of Mayo Clinic does not. In the Center for Innovation physicians and process developers work continuously together in an attempt to improve the internal processes. This can be practical, such as a better setup for the examination rooms, or more treatment process-related, for instance improving the process for ears, nose, and throat examinations for children. For that matter, quality monitoring, improvement and innovation are also part of the regular training courses for new employees. In fact, Mayo Clinic is seen as an organization that can match up to well known continuous process improvement companies like Toyota with their renowned Lean program. The various employees at Mayo Clinic are given a lot of freedom to optimize their roles themselves. For instance, schedules are not based on the number of patients that must be cared for, but rather on the care that these patients actually require. Then an assessment is made every 8 h as to whether that care is still sufficient and based on these outcomes the schedule is adjusted if required. During scheduled appointments physicians are not on call, so there are no pagers that go off during doctor-patient discussions. Doctors that are not with patients are on call and can be hailed via a pager system developed internally for quick and direct contact. In this way, making a diagnosis that does not fall directly under the expertise of the doctor at the patient's bedside can be quickly realized by requesting another physician to join him. This is another good example of how the multidisciplinary teams and good communication contribute to efficiency and effective diagnosis and treatment.

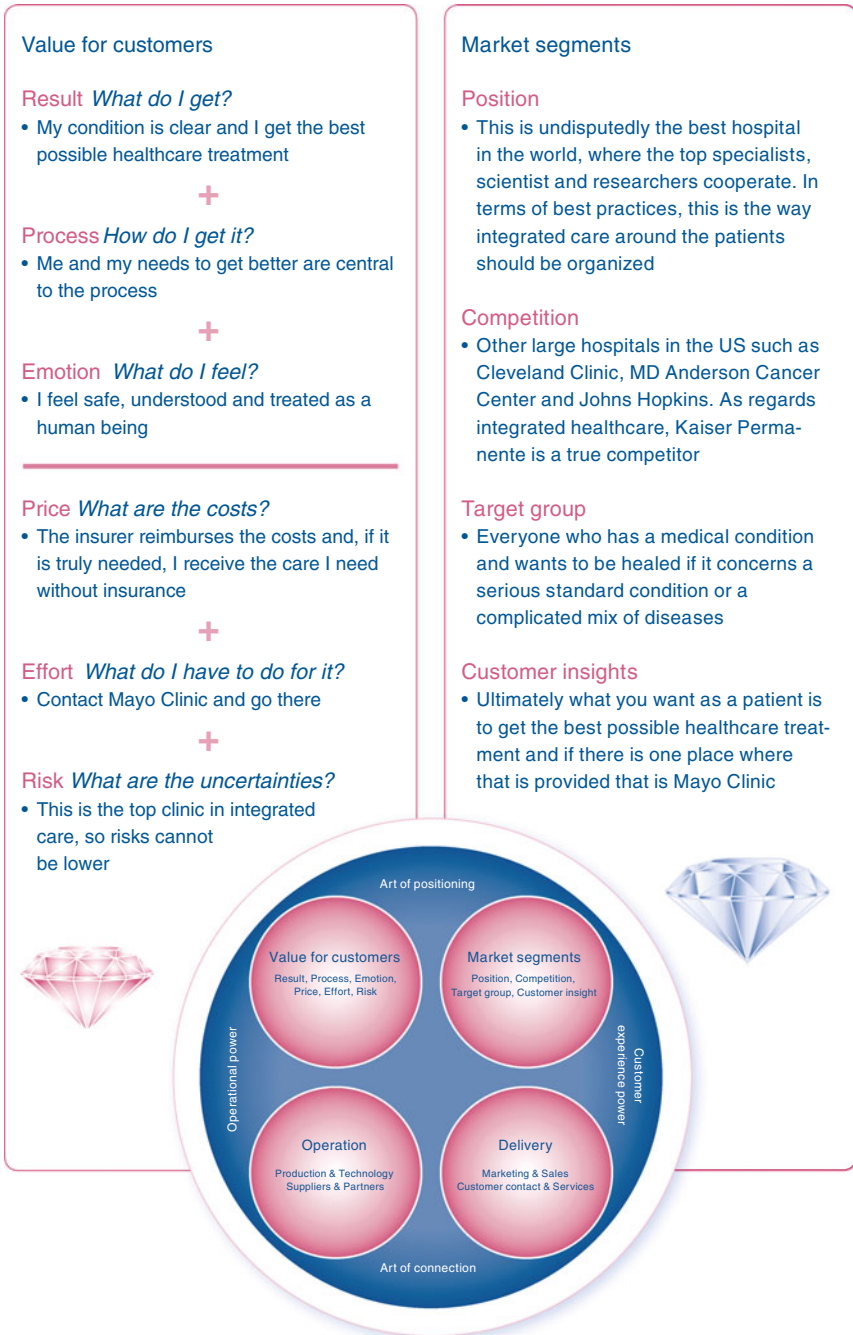


Figure 9.4.2 Value for customers and Market segments of Mayo Clinic

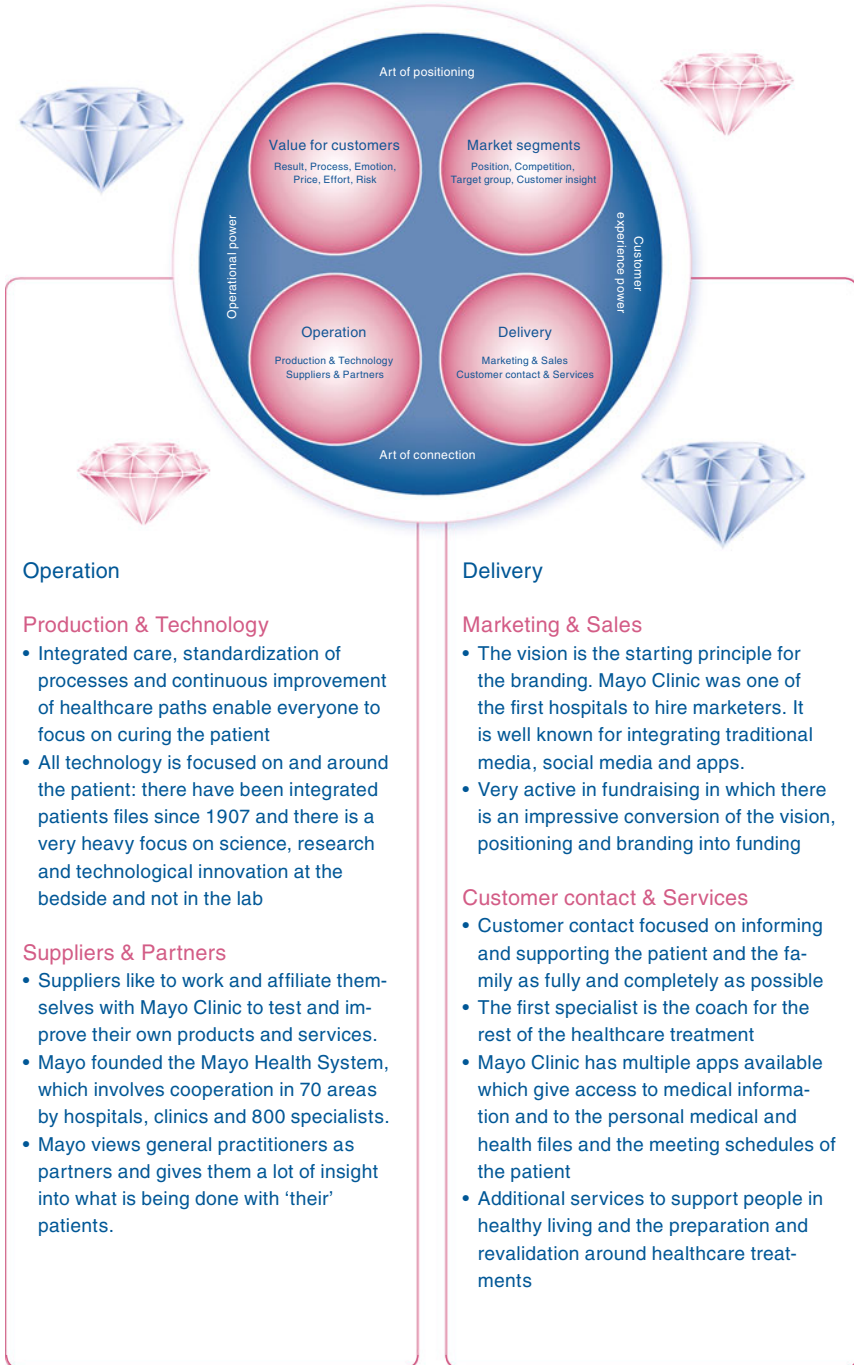


Figure 9.4.3 Operation and Delivery of Mayo Clinic

9.4.3 *Result: How Does Putting the Patient First, Pay Off?*

The fact that everything revolves around the patient at Mayo Clinic is clear, but at the end of the day the question is: what is the result of all these efforts?

The online reviews of Mayo Clinic are full of praise. Even in those cases where the patient deceased from the consequences of his/her illness, the responses of the surviving relatives and family regarding Mayo Clinic are still positive and heart-warming. Whereas it sounds strange in this context, the praise of patients is repaid in the form of the patient's "loyalty." He or she will certainly recommend Mayo Clinic to friends and family if they themselves need any care. This is also evident from the constant stream of revenues that Mayo Clinic receives from gifts, bequests and donations from patients. In 2012, there were 191,619 of them—no less than 750 a day! The total amount thereof in 2012 exceeded USD 361 million (EUR 325 million) Mayo Clinic devoted this entirely, of course, to research and science. Ultimately, a net operating income of USD 834 million (EUR 751 million) was posted for 2014. That is an operating margin of 8.5%, which meets the requirements of the organization's long-term vision.

For many years, Mayo Clinic is one of Fortune's *100 Best Companies to Work For*. There is, of course, a reason why Mayo Clinic is on that list. It is because all elements that play a role at the core of working within healthcare are arranged exceedingly well here. The people who come to work share the same goal: doing everything to ensure that sick people become better again and to support them in the entire process that patients have to go through to achieve that. They consciously opt for a hospital where the specialists earn a salary just like everyone else and in that sense are on equal footing with the researchers and nurses. It is a multidisciplinary team that works on the basis of mutual trust and respect and whose members strive to reach for the top, day in and day out. One where everyone makes a contribution based on integrity and professionalism in order to realize their joint goal. Important in the employee value is also directing resources based on the actual required care instead of on the number of patients in the hospital. As a result, patients receive the care they need, which contributes to an increased level of involvement on the part of the employees, who in turn also go to work with a happier feeling. That team spirit is also the reason that Mayo Clinic is an unprecedentedly strong brand as far as healthcare is concerned. Dr. Leonard Berry of Mayo Clinic took a year-long sabbatical to investigate the organization of Mayo Clinic and the experience thereof in the outside world. Together with Sandra Lampo of the London Business School, he wrote an article about the strategy of the hospital.⁸³ In it he explains that the success of Mayo Clinic stems from three factors: remaining faithful to your vision, building up a brand with your customers by always doing more than just the "standard" delivery of services and by having your vision radiate throughout your staff members. They are, after all, the persons who deal with patients on a daily basis.

⁸³Berry and Lampo (2004).

Mayo Clinic delivers a significant and a unique contribution to society. Since 1919, Mayo Clinic has developed into an enormous care institute that nowadays helps more than one million patients annually. It was calculated that in 2012 Mayo Clinic contributed directly and indirectly to the maintenance or creation of 144,468 jobs. Mayo Clinic has three specific research centers whose goal is to make a contribution to better care in the world: the Center for Individualized Medicine (set up to modify medication to the genetic profile of the patient), the Center for Regenerative Medicine (focused on replacing cell material and better anticipating the total healing process of the body) and the Center for the Science of Healthcare Delivery (where evidence-based care models are further developed). As a whole, Mayo Clinic invested more than USD 885 million (EUR 796 million) in education and research programs in 2012. In that year Mayo Clinic also invested in excess of USD 2.5 billion (EUR 2.2 billion) in hundreds of local initiatives near their own hospitals to strengthen care and health, youth or other training programs, employment, and personal development.

Via its own five educational institutes, Mayo Clinic also makes a contribution to training thousands of good, motivated healthcare practitioners. It has been calculated that USD 4 million (EUR 3.6 million) in training investments now, can produce USD 40 million (EUR 36 million) in savings later. A regular part of the training courses for doctors is a residence in a medically “weak” country in order to use the vision of Mayo Clinic there and in doing so improve its care system. Upon completion of their training, the graduate healthcare practitioners (2608 in 2012) begin their careers spread around the USA. They take the vision for care of Mayo Clinic with them and disseminate it throughout the country. The continuous pursuit at Mayo Clinic to improve and to speed up the diagnosis process, contributes to a quicker recovery. This is not only in the interest of the patient, but also of others. Such as employers that incur less losses and costs in labor participation by sick employees which in turn is more advantageous for insurers, employers, and society as a whole.

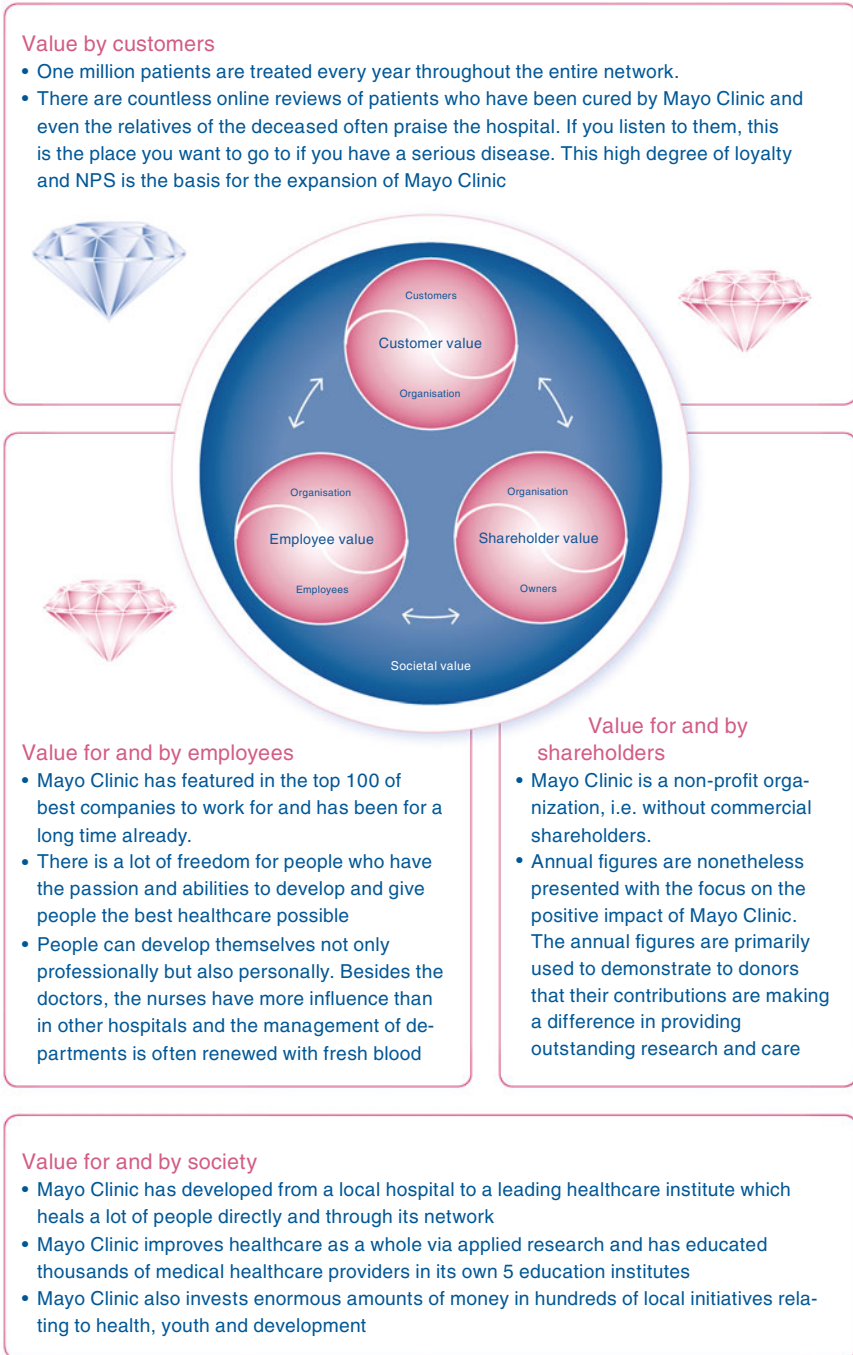


Figure 9.4.4 Value for and by stakeholders of Mayo Clinic

9.4.4 The Brilliant Lessons of Mayo Clinic

This is the dream of all sick people, as the ideal place for the treatment of very complex illnesses can come true here. It is a place where everything comes together: diagnosis, science, research, integrated treatment, and teamwork involving everyone for benefit of the patient.

- Placing the patient at the center of attention and believing in your vision can connect individual specialists, other healthcare practitioners and management. You will excel if you truly give this guiding principle top priority in what you do and want as an organization. It is a valuable pursuit: remove the wrong stimuli and temptations from the system—such as focus on number of treatments instead of quality of treatments—and replace that with alternatives that reinforce the vision—such as treating all staff members including specialists as employees. Get rid of the ballast of the past that does not benefit the patient and distracts you from the goal of simply giving the patient the best possible diagnosis and treatments.
- Realizing integral care must be converted into all components, people and processes that can add value—from staff selection, work or other processes to real-time electronic patient files and now also integrated apps for mobile telephones. It demands not only interventions in information, systems and processes, but also in the culture and attitude of mutual teamwork in which medicine becomes a truly cooperative science.
- Keep on learning. Feedback loops at every level in the organization, focused on quality and attitude, are essential. Negative experiences should be enough to prompt participants to improve the process again and again. When this becomes part of your total organizational reports, not only will the quality and efficiency improve, but your employees and customers will also value it positively.