Online Marketing of Medical Devices

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Abstract

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Purpose: The specific aim of this study was to investigate whether online marketing directly to patients could drive demand for medical devices.

Method: Qualitative questionnaires were sent and handed out to specialists and resident medical doctors at different hospitals in Sweden. The study included the questionnaires obtained from twenty doctors.

Main results: The main result of this thesis was that the patients actively sought information on the Internet before the appointment with their doctors.

Practical implications: To gain a more sustainable advantage in the new competitive environment, a company in the Medtech industry should be able to successfully integrate this phenomenon in all marketing elements like advertising in the right places, search engines, newsgroups, and a variation of different online marketing tools to improve its website.

Key words: Internet marketing, online marketing, Internet, marketing, relationship marketing, AIDA, AIDAS, medical, Johnson & Johnson, JNJ
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Summary

Today, people tend to use the Internet more as a source of information, instead of only reading newspapers or watching TV. A better connection speed and better computers open up a new world of information exchange and services offered.

A company that wants to market its products on the Internet can use several online marketing and advertising tools in order to get a customer’s attention. After the company attracts customers’ attention, it has to create a desire and to demonstrate why the customer will be satisfied with the company’s products. If the company succeeds or not, depends on how well it communicates its message to the customer.

The specific aim of this study was to investigate whether online marketing directly to patients could drive demand for medical devices. The thesis was based on a questionnaire that was sent and handed out to specialist and resident doctors at different hospitals in Sweden. The answers received from the respondents highlighted that it was a common practice for the patients to seek information on the Internet before their doctors’ appointments to the hospital. The age of the patients searching Internet information was between 18 and 65. To gain a more sustainable advantage in the new competitive environment, a company should be able to successfully integrate the above mentioned phenomenon in all marketing elements, like advertising in the right places, search engines, newsgroups, and a variation of different online marketing tools to improve its website.
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1. Introduction

How often do patients use Internet to search for information about treatments and learn more about their condition? When they come and visit their doctor, how well are they prepared and know what diagnosis they have and what kinds of treatments are available?

The patients will certainly look for a second opinion and not only listen to their first doctor’s suggestion for the treatment. Especially people born in the 1940s that now are getting older will probably have higher demands for a better life situation. They enjoy traveling, spending time out or doing sport activities. This group of people is searching for treatments that will give them possibilities to continue their life pattern, like playing tennis and traveling around the world (Knis, interview).

The phenomenon of online marketing is not new. However, the patient’s interest to seek information about medical solutions on the Internet and to recommend them to their doctors is a new behavior (Knis, interview). Marketers in Medical companies can take advantage of this information in order to attract customers to a company’s website. How does then a good website look like and what is required? In pace of the technological development, it is important to be regularly updated and take advantage of the opportunities that it offers.

1.1 Purpose

The purpose of this study is to investigate if online marketing directly to patients can be a marketing channel to drive demand for a company’s products.

The questions that this thesis tries to answer are:

- Is it common that patients seek information on the Internet before their visit to the hospital?
- Is there a difference in the age of the patients that seek information on the Internet?
- How can a company use this information to improve its marketing effort?
1.2 Delimitations

The thesis provides an insight into online marketing as a possible channel for a Medical company on the Swedish market. The study will not investigate other countries’ markets. The areas that this thesis will focus on are joint prostheses, incontinence, and obesity surgery in order to get patient awareness of available treatments.

2. Theory

This chapter intends to make a description of the different theories and also a description of the model that is chosen. Afterward, a connection is made between them, to enable the reader to understand the ways in which they are intended to be used.

2.1 Relationship Marketing

The traditional marketing theory, like the 4Ps (price, product, promotion, and place), is being less and less applied by marketers around the world (Höij, Lones & Stjärne, 1996 p. 22). Today it is more about using the relationship marketing theory, especially for those who are working with marketing on the Internet (Höij, Lones & Stjärne, 1996 p. 22). According to Gummesson (1999), a definition of relationship marketing is:

“Relationship marketing is marketing seen as relationships, networks and interaction.”

Gummesson (1999) explains that “relationships require at least two parties who are in contact with each other. The basic relationship of marketing is that between a supplier and a customer.” The author further explains that “a network is a set of relationships which can grow into enormously complex patterns.” The parties in the relationships or the complex networks enter into active contact with each other and this is called interaction (Gummesson, 1999 p. 1-2).
The theory builds on the concept that a company, in their marketing effort, prioritizes the long term relationships it has with its customers (Höij, Lones & Stjärne, 1996 p. 24). A company that uses the theory aims at satisfying their customers’ needs over time in order to retain them (Hanson, 2000 p. 188). Höij, Lones & Stjärne (1996) write that relationship marketing also strengthens the bond between the supplier and the customer to rationalize deliveries and orders, which lead to decreasing costs for both parties.

The Internet, which is an interactive medium, has proven to be a very effective marketing tool to reach the goal of relationship marketing, as it gives the company the opportunity to establish personal relationships with its customers. A company that uses the Internet as a communication channel can reach and communicate with many customers at the same time and saves time by letting the computers handle the communication. It is not necessary for the company to have a personal contact with every customer in order for the customer to feel connected with the company. It can instead create a web service that makes the visitors/customers feel welcome to the company and want to return to the website again. By doing this, a relationship can be established between the company and its customers and the company can look forward to a profitable future on its market (Höij, Lones & Stjärne, 1996 p. 23-24).

### 2.2 Internet Marketing

Our world is changing all the time. In former times, when the customers wanted to seek information about a company’s products, they were forced to seek for it in stores, catalogues, newspapers and so on. Nowadays, the same information can be sought on the Internet (Janal, 2000 p. 19). Online marketing has a lot of advantages compared to other marketing channels. One advantage is that a company can save a lot of money if they are marketing their products on the Internet (Best, 2005 p. 276). Another advantage is the great penetration that this type of marketing offers (Best, 2005 p. 278). A company’s market becomes not only regional, but international. A large number of people around the world can seek for the company’s products on the Internet and buy them (Hanson, 2000 p. 5).

According to Janal (2000), Internet is a good way to get attention from your customers. A company that uses marketing on the Internet can reach a large number of people in a cost
effective way (Best, 2005 p. 275). It is a very intimate selling situation as the customers that are online have preselected you, they want to see you and you are interacting with them. But online success is not guaranteed and hard work, attention to detail and constant promotional activity is required. To reach customers, the online marketers can use a number of different Internet tools, for example websites, newsgroups, e-mails, automated e-mails, online conferences, news, and financial services (Janal, 2000 p. 15).

**Websites** are company sponsored areas on the Internet which contain information about the company itself and its products. The website lets the company interact with its customers through different ways, like conferences, chat rooms, mailing lists, shopping opportunities, and customer support (Janal, 2000 p. 15).

People with similar interest and needs can join discussion groups, **newsgroups**, where they read and write messages to each other. The company uses these in order to study market trends, seek out new potential customers and contribute with information to the community (Janal, 2000 p. 215).

**E-mail** is a superior communication tool for marketers to interact with customers and companies, because it is cost effective, easy to use and almost everyone has it. Online marketers can quickly respond to customers’ e-mail requests and product orders at any time of the day or night. E-mail can be used to alert stakeholders with important news about the company and notify customers of sales and special offers (Janal, 2000 p. 15, 199-200).

**Automated e-mail** may be compared to a robot, also called mailbots or infobots that automatically send prewritten messages describing a company’s products or service in response to customers’ e-mail requests. The company has a library of prewritten answers to the most frequent asked questions (FAQ: s) and when customers send a message to a special e-mailbox they will receive an answer in seconds. This process saves the company time and allows the staff to focus on the more difficult questions (Janal, 2000 p. 15-16, 201).

Companies can hold **conferences** online with their customers, using for example chat rooms and forums. A company can provide free software to their stakeholders so they can listen to the company’s meetings and have a chance to e-mail questions and participate. This allows
the company to create long and lasting relationships with their community (Janal, 2000 p. 16, 249).

A company can use the Internet to send newspapers and newsletters about products to existing customers. This saves the company money and creates value to the products (Janal, 2000 p. 16 / Höij, Lones & Stjärne, 1996 p. 76).

### 2.3 The AIDAS Model

Internet marketing is one way for the company to reach customers with its message. If the company succeeds or not, depends on how well it communicates its message to the customers. The AIDAS model describes the influence or the mediation of a message (Expowera website). It is used to explain the different stages that a consumer has to go through before he buys a product or a service (Jakobsson, 1995 p. 87).

#### 2.3.1 The elements of the model

The AIDAS model consists of five elements: A = Attention, I = Interest, D = Desire, A = Action and S = Satisfaction (Jakobsson, 1995 p. 87). The most common way to demonstrate the model is to illustrate it like a staircase (Fig. 1).
2.4 The Connection between the Theories and the AIDAS Model

The first three steps of the AIDAS model mean contact creating communication (Jakobsson, 1995 p. 94). The first and the second step can be achieved by using the Internet as a medium but can be strengthened through a combination of other mediums. The third step depends on how well the company has succeeded to create desire (Jakobsson, 1995 p. 108).

Attention – The first step of this model is used to attract the customer’s attention for the company’s products. The attention can be created in different ways; one of them is through the Internet. It is important for the company to appear on frequently visited websites in order to improve the chance of attracting the customer’s attention (Jakobsson, 1995 p. 95). The company can also create attention through sponsoring popular websites on the Internet (Jakobsson, 1995 p. 97). Another way in which the company attracts attention is using the different newsgroups on the Internet (Jakobsson, 1995 p. 102). This can be useful because people that share the same interests and same problems tend to ask questions and post comments on the newsgroups. Participating in newsgroups and answering customers’ questions will help build the relationship the company has with its customers (Janal, 2000 p. 215-216).

Interest – The second step of this model is used by the company to raise the customer’s interest by demonstrating the features of their products, the advantages that their products possess and the benefits that the consumer can gain if he uses the company’s products (Wikipedia website). The company can raise the customer’s interest by using the Internet as a source of information. It is very important that the company designs its website so that it is easy to navigate and seek information on it (Smith & Catalano, 1998 p. 41). For example, the company can put pictures of the products and information about the different materials used. It can also use three dimensional models of the products so the customers can get a “real life” experience (Lones & Stjärne, 1996 p. 123-124). This is a strategy a company can apply in order to build a relationship to the customers and be able to retain them.
Desire – The third step of this model is important for the company because it must convince the customers that they need the product and that it will satisfy their needs (Wikipedia website). The offer, the consumer’s confidence in the Internet and the price that the company requests for its products are also important parts that lead to a customer’s desire (Jakobsson, 1995 p. 108). It is possible for the company to present small films on its website with previously satisfied customers. It can also use e-mails to alert customers of sales and special offers. By keeping the customers regularly updated with new information about the company and its products, helps develop the relationships the company has with its customers (Janal, 2000 p. 15, 36, 38, 199-200).

Action – The fourth step of this model is the result of the first three steps, if they are successful. If the customer has decided to buy the company’s products, then it is the company’s job to be accessible for the customer (Jakobsson, 1995 p. 111). For example the company can have employees that are accessible twenty four hours a day to answer questions that the customers might ask, directly on the Internet through chatting and e-mails. The accessibility offered by the company can be seen as a good reason by the customers, in order to maintain their relationship with the company (Janal, 2000 p. 15, 200).

Satisfaction – The last step of this model is the result of all four previous steps. If the company succeeds in creating a website that attracts and satisfies its customers, it will have a better chance to keep them coming back (Janal, 2000 p. 17). It is always cheaper to keep the old customers than to obtain new ones all the time. This is in line with the relationship marketing approach (Jakobsson, 1995 p. 125). If the company wants to be successful, it will focus on its customer’s needs, which means a close contact with the customers. This would lead to satisfied customers that become loyal to the company (Best, 2005 p. 6). Also, customers that are satisfied with the company will recommend the company to others and are in that sense a part time marketer for the company without burdening the marketing budget (Gummesson, p. 184-185, 199).
3. Method

This chapter intends to make an explanation of why the subject is chosen. Afterward, the choice of investigation method is described. The following parts contain information about the procedure, collected data, sampling method, implementation and the questionnaire. Finally, the trustworthiness of the study is discussed.

3.1 Choice of Subject

A personal contact is working at Johnson & Johnson AB and asked us if we were interested in investigating the subject that this thesis is based on, as the company is thinking of improving its website. The subject was handed out by one of his colleagues, Mr. Magnus Knis, from whom we received useful information about the company. Until now, the company has focused on professionals to market its products in hospitals, but now with the presence of Internet in “everyday” life, it started to investigate Internet marketing directly to the patients by informing about available treatments.

3.2 Qualitative Investigations

A qualitative investigation can be used to understand how people reason or react, or to distinguish different action patterns (Trost, 2001 p. 22). The qualitative investigation leads to answers that give new knowledge because the answers are well thought out (Lindblad, 1998 p. 25). A qualitative investigation was chosen, which consisted of a questionnaire with easy to understand questions. In order to get in contact with the respondents within the time limit, the questionnaires were sent through e-mails or handed out as paper copies.

3.2.1 The procedure

The investigation was accomplished by using qualitative questionnaires that were handed out to different specialist doctors. The hospitals investigated in our study are different hospitals all over Sweden, both government and private owned. The results obtained from the surveys
can be used by Johnson & Johnson AB, the Nordic affiliate, to gather information in order to improve their Swedish Internet website, www.jjsweden.com.

In order to get in contact with the respondents, the search engine Google was used to look for suitable hospitals. The company also helped us with some names to contact. A number of seventy specialist doctors working at different hospitals in Sweden were contacted, but only twenty doctors working in seven hospitals answered.

The preparation of the questionnaire was based on a discussion with the contact person at Johnson & Johnson AB. From that discussion, questions were formulated in order to answer this study’s purpose. In the e-mails and telephone contacts, we presented ourselves and the intention of the questionnaires, so that the respondents understood the purpose and could decide whether they wanted to participate. It was stipulated both in the presentation and in the questionnaire that the respondents could be anonymous if they wanted.

The results from every questionnaire have been compiled in tables for an easier overlook. Some of the respondents’ more comprehensive answers have been quoted in order to make it easier to read. Every quotation has been translated from Swedish to English and the structure of the sentences has been adjusted thereafter.

The results from our questionnaire demonstrate if the company should focus on improving its Internet marketing effort by informing about available treatments. The selected model displays how the company can use this information in order to achieve best results from each of the five steps, attention, interest, desire, action, and satisfaction by using relationship marketing.

### 3.2.2 Collected data

To answer the research questions of this thesis, both primary and secondary data have been used. Primary data has been collected specifically for a study’s purpose (Saunders, Lewis & Thornhill, 2003 p. 188). Primary data used in this thesis, was information based on participants’ answers to a composed questionnaire and contacts at Johnson & Johnson AB. Secondary data is data that has been collected and analyzed for some other purpose than this
thesis’ purpose (Saunders, Lewis & Thornhill, 2003 p. 188). Secondary data, as information about the company, Google, and Internet usage was compiled from websites on the Internet.

### 3.2.3 Sampling method

It was chosen to use a strategic sampling method, in order to get a variation in the sample. The sample should be heterogeneous within the given homogeneity (Trost, 2005 p. 117). The sample of respondents to the present questionnaire was made from their profession. They perform operations within the areas that were chosen to focus on; which are joint prostheses, incontinence, and obesity surgery. Seventy specialists and resident medical doctors working at different hospitals in Sweden were contacted. From those, a number of twenty specialist and resident doctors agreed to answer to our questionnaires. Nine of them worked at Uppsala University Hospital, one worked at Karolinska University Hospital, one worked at Saint Göran’s Hospital, one worked at Sahlgrenska University Hospital, one worked at Carlanderska Hospital, one worked at Nyköping Hospital and one worked at Ersta Diakoni Hospital. The rest of the respondents wanted to be anonymous.

### 3.2.4 Implementation

The methodology included a postal or e-mail questionnaire sent to about seventy different doctors (there was a 29% return). By using e-mail or telephone we explained our intentions to the possible responders. In some cases, the doctors could be reached through the secretary who communicated the message and transmitted the information. In other cases, we obtained an e-mail address to send our questionnaire, hoping to get an answer back.

### 3.2.5 The questionnaire

The questionnaire was composed of closed questions which offered the opportunity for more in-depth commentary on specific issues related to the preferred sources of information. This would give Johnson & Johnson AB a guideline whether they should focus on online marketing directly to patients by informing about available treatments.

The questionnaire consisted of sixteen questions, of which the first three questions concerned the respondent’s name, profession and years of working. In the sixteenth question, we asked
the respondent if he/she wanted to be anonymous (see Appendix 1). The rest of the questions reflected two of this thesis questions; is it common that patients seek information on the Internet before their visit at the hospital? Is there a difference in the age of the patients that seek information on the Internet?

**3.2.6 Trustworthiness of the study**

Trustworthiness is made up of four criteria; credibility, transferability, dependability, and conformability. The criteria credibility means how believable the findings of a research are (Bryman & Bell, 2003 p. 35, 288). The respondents in this thesis are not partial, as the questions do not affect their work, but they only describe their everyday work situation. The main part of the respondents worked at the same hospital due to the contact we established there. This should not affect the result because they had different professions and were independent of each other. The disadvantage of the primary data we have used is the fact that the information came from secondary sources, the doctors, rather than from primary sources, the patients. We were aware of this problem but due to the time limit, we were unable to get the patients to answer our questionnaire. It is also a sensitivity issue since the questions concern personal conditions that people might not want to reveal.

The transferability criteria mean if the findings can be applied to other contexts (Bryman & Bell, 2003 p. 35). It is possible to apply the findings in the thesis to study other businesses. The Internet is already being used by millions of companies around the world in order to sell products and services. Still, there are companies that have not taken advantage of using it yet.

Dependability means if the findings likely can be applied at other times (Bryman & Bell, 2003 p. 35). As the development of the Internet seems to have no end and the Internet is constantly being enlarged, it is more likely that this thesis will not yield the same result in the future.

Confirmability means if the investigator has allowed his or her values to intrude to a high degree (Bryman & Bell, 2003 p. 35). As an author, it is hard to be completely objective when dealing with such an extraordinary phenomenon like the Internet. You can reach people all over the world to a minimum cost and at any time a day. We are and have been using Internet as far in our grown-ups years as we can recall and it is impossible to think of a life without it.
Though, in this thesis, we have focused on what other people may think and feel about the Internet and more particularly how the doctors perceive their patients’ thoughts of the Internet as an information source when dealing with sicknesses and injuries.

4. Empirical Material

This chapter contains information about the company and its marketing. Afterward, information about the Internet and search engines is brought up. Finally, a table of the respondents’ profession is shown and the result of the investigation is presented.

4.1 Company Background

Johnson & Johnson is a global American manufacturer of pharmaceutical products and medical devices founded in 1886. Johnson & Johnson includes more than 250 subsidiary companies with operations in 57 countries and its products are sold all over the world. The company’s guideline can be found in something called “The Credo” which has been adopted by all of the company’s parts for more than 60 years (Johnson & Johnson global website). The range of products and services comprise everything from medicine and nursing equipment to hygiene and prescription-free products (Johnson & Johnson AB’s Swedish website).

4.2 The Company’s Marketing Today

Today, Johnson & Johnson AB directs its marketing of products and treatments mainly to professionals. The company’s sales department responds to requests from the customers central purchase organization, for example Stockholm county council and most of their products are being bought up by the public sector. In order to inform about their products and treatments, Johnson & Johnson AB sends circular of brochures, product sheets, and product catalogues to doctors and nurses at hospitals around Sweden (Knis, interview).
To reach the customers, sales people visit the nurses and doctors at their hospitals and private clinics to show and inform about Johnson & Johnson AB’s different products that may suit their needs and let the customers have a chance to try them as well (Knis, interview).

The company also participates at professional shows and other kinds of arrangements, for example “the surgeon days”, which are held in Sweden once a year. This gives it a great opportunity to exhibit and promote its products in a place where many professionals are present to seek new medical methods. Furthermore, the company can get information and feedback about its old products and what they perhaps are lacking, in order to have a chance to improve the already existing products and make new and better ones with greater benefits (Knis, interview).

Johnson & Johnson AB organizes educations and practical training sessions, for example in suture techniques, where the target group can be everything from student training to more advanced training, for example advanced heart surgery, which takes place at education centers around Europe. The company also arranges symposiums with invited speakers and educational visits at different plants and European hospitals. At times, Johnson & Johnson AB advertises in medical journals and in some few cases, through journalists, written articles in the daily press, about simple operation methods to attend to the incontinence. Normally, the company tells about these methods directly to the surgeons (Knis, interview).

4.2.1 Johnson & Johnson AB’s website

Johnson & Johnson AB’s Swedish website, www.jjsweden.com, has two choices for the web surfer to choose between today. One of them is “Sjukvården” and is aimed at doctors and medical personnel. If you click here, you can get information about different therapy areas and the products it offers through its global gateway. If you, as a doctor already are a customer, then you can log in with a password to its Internet store and order products, get price information and more. The other one is “Patienter” and is aimed at consumers, where you only can read general information about different diseases, complaints, and available treatments. This is concerned with a policy that the company has, that says that the company is not allowed to provide medical advices and recommendations directly to consumers (Knis, interview).
4.3 The Internet

4.3.1 Everyday usage of the Internet

The following graph and table shows the everyday usage of the Internet by sex and age (SCB website).

Graph 1: Everyday usage of the Internet by sex and age shown in per cent

Table 1: Everyday usage of the Internet by sex and age shown in numbers

<table>
<thead>
<tr>
<th>Age</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-24 years</td>
<td>399 678</td>
<td>404 676</td>
</tr>
<tr>
<td>25-34 years</td>
<td>372 640</td>
<td>460 269</td>
</tr>
<tr>
<td>35-44 years</td>
<td>418 924</td>
<td>495 994</td>
</tr>
<tr>
<td>45-54 years</td>
<td>312 768</td>
<td>394 017</td>
</tr>
<tr>
<td>55-74 years</td>
<td>296 243</td>
<td>464 476</td>
</tr>
<tr>
<td>55-64 years</td>
<td>233 058</td>
<td>308 792</td>
</tr>
<tr>
<td>All</td>
<td>1 800 251</td>
<td>2 219 433</td>
</tr>
</tbody>
</table>

Source: Statistiska Centralbyråns (SCB) website

4.3.2 Search engines

The absolute majority of the people that are using the Internet for information seeking are using a search engine (Smith & Catalano, 1998 p. 40), for example Google. There are other
search engines like AltaVista, Yahoo and MSN, but Google is the most commonly used engine (SEO website). A company that wants to link their website to a search engine so that people can find it can do that for free, but if the company wants to have its website among the first search results, it will cost them (Google website).

Google offers different types of advertising, from free registration that will result in that the company’s website can end up wherever among the search results, to advertising that the company pays for and therefore can end up among the AdWords Ads, (Fig. 2) (Google website).

![Figure 2: AdWords Ads (Google website)](image)

The customer types the word that he is interested in, in the search bar, for example “orthopedia” and after that, the company’s name and website address will appear under the AdWords Ads. The AdWords Ads work in the way that the company only pays Google when people click on the company’s name, called cost-per-click pricing, (Fig. 3). It is the company that sets up a budget on how much it wants to spend on advertising through the AdWords Ads. This kind of pricing is attractive for the company because it can have full control of their advertising expenditures. The price that Google will charge the company when someone clicks on the company’s AdWord Ad depends on the quality of the keyword that the customer types in the search bar. If the keyword typed has a very high Quality Score, then it is cheaper for the company to pay for it. In order to check out different keywords’ quality and thus their Quality Score, you will need an account and we do not have any (Google website).
Johnson & Johnson AB has already connected its website to the Google AdWords Ads, but today it only appears among the AdWords Ads when the customer types medically correct terms, for example “orthopedia”. If the customer types “prostheses”, it will not appear. As the company wants to focus on ordinary people too, and not only specialists, it would be important to link everyday terms among medical ones.

4.4 The Respondents’ Profession

The respondents that have answered our questionnaire have the following specialities: four are working within the joint prostheses area, three are working within the incontinence area, two are working within the obesity area, two are working within the anesthesia and critical care area and one is working within the vascular surgery area. The rest of the respondents did not specify their working area, but it is possible that a large part of them are working within the first three mentioned areas (see Appendix 3).
4.5 The Result of the Investigation

Do you know if your patients are using the Internet to seek information about their condition/complaint before their visit at the hospital?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>15</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Sometimes</td>
<td>4</td>
</tr>
</tbody>
</table>

The majority of the respondents answered yes to this question. On of the “yes” respondents, Mörlin wrote “the patients’ relatives are also seeking information on the Internet”.

If yes, do they have (as a result of their knowledge) high demands on the latest and sometimes the most expensive treatment?

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<td>Yes</td>
<td>7</td>
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<td>No</td>
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<td>Sometimes</td>
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Mörlin answered “no” on this question and wrote “the patients just want to be prepared when meeting the doctor and get a deeper insight into the different treatments”. Olbers wrote “a good knowledge about the different treatments offered leads to a good discussion between the patients and the doctor and hence a good result”. Sundbom wrote “we only have two types of operations and the patients can not choose by themselves”.

Are these demands too high and have they created unrealistic expectations?

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<td>No</td>
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Among the “yes” respondents, Milbrink wrote “the patients believe that they can continue with their previous activities after a prosthesis operation. Technically, the patients can
continue with their sports after a successful operation but as a treating doctor it is worrying that the patients will expose their artificial joint for great strain which can lead to broken bones and a reoperation with a worse result”. Olbers answered “no” on the question and wrote “if the patients read a lot about the treatments, they often get a realistic picture. Chat rooms work well”.

How realistic and medically correct is the information you get from the patients?

All respondents gave different answers on this question. For example, Miclescu wrote “it depends on the patients’ extraction and the information is unrealistic but often medically correct”. Another respondent wrote “it depends on how well the patients interpret the information”. Cantar’s answer was “it is difficult to estimate”.

Which age group would you say is the one that seeks most information on the Internet?

All respondents gave different answers for example the ages 20-45, 20-50, and 30-60. The age that occurred mostly was 20-50. The lowest age among the answers was 18 and the highest age was 65.

Do you have any idea about where the patients are seeking the information from?

<table>
<thead>
<tr>
<th>Search engines</th>
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<tbody>
<tr>
<td>Medically relevant websites</td>
<td>4</td>
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<tr>
<td>Both search engines and medically relevant websites</td>
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<td>No</td>
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Milbrink wrote “the doctors sometimes give the patient tips about companies that offer relevant products”. The respondents that answered “both search engines and medically relevant websites”, gave us some websites that patients are using, for example www.cancerfonden.se, www.viktop.se, www.vardguiden.se, www.sinoba.se, and different patient forums.
Has this new information channel, where the patients seek the information on the internet by themselves, changed the relationship between doctor and patient?

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<td><strong>Yes</strong></td>
<td>13</td>
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<td><strong>No</strong></td>
<td>6</td>
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<td><strong>Sometimes</strong></td>
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</table>

Among the “yes” respondents, Milbrink wrote “I often get e-mails from patients that find information on different websites produced by previously operated and grateful patients”.

**If “yes”, to what extent?**

Three respondents have not answered the question. The other sixteen respondents wrote different answers. Dahlstrand wrote “the doctors have to modulate the information that the patient has on the basis of the individual condition”. Sundbom wrote “it is good that the patients are well-informed, because it makes my work easier”. Hagmar wrote “more engaged and competent patients participate more in their treatment which leads to better treatment result”.

**Does a well-informed patient make your work easier?**

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<td><strong>Sometimes</strong></td>
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Among the “yes” respondents, Jestin wrote “it can be a different discussion with a well-informed patient, in a positive sense”.

**If “yes”, to what extent?**

On this question, all except of seven respondents answered. Miclescu wrote “it is easier to explain for us doctors” and Mörlin wrote “we can have a better conversation with the patient”.
Hagmar answered “to a large extent, but only if the information they have is trustworthy, otherwise it makes my work more complicated”.

**Does a well-informed patient make your work more complicated?**

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<td>No</td>
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<td>Sometimes</td>
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</table>

Dahlstrand answered “yes” and wrote “it does not complicate my work, but it forces us to be updated and to explain why we make the judgments that we do”. Ankardal wrote “it depends on how able the patient is to critically understand the information. I believe that most times it is good with different sources of information. There is no absolute truth”. Hagmar wrote “it takes more of my time, but it is worth it”.

If “yes”, to what extent?

Eleven respondents did not answer the question. The rest wrote different answers. Hesla wrote “sometimes, the patient has read about experimental methods and thinks that these are commonly accepted methods”.

### 5. Analysis and Results

In this chapter, an analysis is made between the results from the questionnaire and the model that is explained in the theory chapter. The main focus is based on the most significant questions that were asked in the questionnaire and how they are connected to the theoretical model, relationship marketing, and Internet marketing.

A company must attract a customer’s **attention** for its products. The respondents’ answers indicated that it is common for the patients to use the Internet for health information before their visit to the hospital. The largest part of the respondents wrote that it is common for the patients to use search engines, as Google, when they are seeking the information. This shows that it is important for the company to use this information in order to advertise on the right
place, like the Google AdWords Ads. The company can also participate in different newsgroups and answer the members’ questions. In this way, the company provides information about the company’s products and treatment methods. Especially the newsgroups have a high potential to build a relationship between the company and its customers. It was also interesting to see the age of the patients that seek information on the Internet. The respondents’ answers showed that most of the patients that used the Internet to find health information were between 20 and 50 years old. However, some answers indicated that other ages occurred as well, for example ages below 20 and above 50.

After a company has attracted a customer’s attention for its products, it must raise his or hers interest. According to the result of the investigation, it seems that the information found by patients on the Internet has a good quality which can help the patient to feel more secure about the process that he or she will be exposed to. The patients with a realistic picture of the methods of treatment can understand and have a better discussion with their treating doctor, which in turn can lead to better results. This information shows that the company has to promote its products and treatment methods and it also has to demonstrate the benefits related with them. It is also important that the company’s website is well designed and gives a professional impression, but at the same time to be easily navigated. Having a well designed website with good information that is appreciated by the patients can help building a relationship between the two parties.

After a company has succeeded to raise a customer’s interest about its products and treatments, it has to create a desire so that the customer will feel a need of the products and treatments offered. The respondents’ answers showed that it is not unusual that the patients demand the latest treatments available as a result of their knowledge gathered from the Internet. In order to create a desire, the company could present videos on its website with previous patients satisfied with the company’s products. For example 65 year old Anna, who explains how satisfied she is, after she received a hip prosthesis and that she now can continue with her outdoor hobbies. The company can also keep the patients updated with information about new treatments and product improvements, which nurture the relationship it has with its customers.

After a company has created a desire for the customer, the customer decides whether to take action in getting one of the company’s products or not. If a patient decides to use one of the
company’s products, then the company and the doctor must be reachable for all type of questions that the patient may have. By using for example e-mails and automated e-mails, the company can be accessible twenty four hours a day. However, this step is not a normal buying process for the patient, as it is the hospital that will buy the product for the customer’s behalf and provide the answers. The network in this case is the one between the patient, the doctor who is the company’s customer and the company, whom all interact with each other (Fig. 4).

![Network Diagram]

**Figure 4:** A network of the interacting parties

In order to have a functioning relation with its customers, it is important that the customers are **satisfied**. Two of three respondents explained that the relationship between them and the patients has changed. Due to the fact that patients are well-informed, they tend to participate more actively in their treatment which can lead to a higher grade of satisfaction. It is also interesting to see that two thirds of the doctors mean that a well-informed patient makes their work easier and this behavior can lead to more satisfied doctors. If the patient is satisfied with the company’s products, he or she can recommend the company to relatives, friends, and other people that are in need of a similar help. In this way a strong relationship can be established between the three parties.
6. Conclusion and Discussion

Is it common that patients seek information on the Internet before their visit at the hospital?

According to the answers from our questionnaire, it is common that the patients are using the Internet to seek information before their visit. In some cases, even relatives are seeking information, which highlights that older people that do not have access to the Internet can be helped by the younger family members. The most common method to search information on the Internet is through search engines. Many patients are also seeking information on medically relevant websites that their doctor has recommended. Using the Internet as a source of medical and health information, represented for the patients a method to become more engaged in their treatment, whereas for the doctors, that they should be prepared to offer suggestions for Internet based health resources and to assist patients in evaluating the quality of medical information available. This new phenomenon, to seek information on the Internet, has in most cases, even improved the relationship between the patients and the doctors in a positive way. The doctors think that the conversation with their patients has been improved, as the patients are well-informed and have a better understanding regarding the treatments available. On the other hand, some doctors believe that a well-informed patient could make their work more complicated; for example when a patient has got a certain opinion about a method that is not commonly accepted. In this situation, the doctor is obligated to explain to the patient and tell him his own opinion.

Is there a difference in the age of the patients that seek information on the Internet?

To conclude, the age of the patients that are seeking information on the Internet lies mostly between 20 and 50. We can speculate that most of the people who are in need of medical care have passed the age of 40-50 and they may represent a larger part of the total patients that are seeking information online. However, in a society dependent on computer technology, the people seeking information on the Internet belongs to all ages. The authors’ opinion is that younger people have an ability to use the new technical means more than the older people do, because they see the technology as a natural part of their lives.
How can a company use this information to improve their marketing effort?

A company can improve its marketing effort by different means. If Johnson & Johnson AB wants to improve its marketing effort, it can advertise on the most commonly visited websites, where patients search for information on different methods of treatment. Another way is to use the advertising services offered by search engines, for example Google AdWords Ads. In this way, the patients automatically find the company when they type the keyword in the search bar. Another way to improve the company’s marketing effort is to develop its website so that it is easy-navigated and contains relevant information about treatments and products. The company can for example show small films on it, with previous patients that are satisfied with the company’s products and perhaps a frequently asked questions (FAQ: s) section, where the patients can find information. Improvement of the website is also realized by designing an own chat forum, where the patients and the company could interact with each other. Finally, Johnson & Johnson AB can also use e-mails to maintain a relationship with its customers and to keep them updated with information about new treatments and product improvements. However, the company must take the policy in consideration when it is developing its online marketing.

6.1 Managerial Implication

The above mentioned advertising methods and online marketing tools could be applied by any company that wants to improve its online marketing effort. Doctors could also benefit from a company’s online marketing in a way that they could be updated with new information about possible treatments and being better prepared to answer the patients’ questions.

6.2 Criticism of the Study

The limitation of this thesis is that the survey included doctors working at different hospitals in Sweden and not the patients themselves. As there are many factors to be considered, it would have been probably of more value to interview both the doctors and the patients and to draw parallels between their answers. If we could have done this, the results might have been different. Due to different diseases from different areas of medicine that we have chosen to
focus on, we believe that it would have been almost impossible to get in contact with the mentioned patients within the time limit that we had. If we have had investigated other less sensitive areas, it might have been easier to get in contact with the patients.

6.3 Proposal for Further Research

This thesis focused on demonstrating how online marketing drives demand for medical devices. However, this study is done in a time of continuous technological development. It would be interesting to see how new technological means will change in the future online marketing and how doctors will deal with the fact that the patients are more updated than themselves.
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8.1 Literature References


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8.3 Interview

Magnus Knis, Johnson & Johnson AB. (E-Commerce Manager).
APPENDIX 1: The English version of the questionnaire

Dear Sirs,

We are two students from Uppsala University who are writing a thesis in Business Studies about how online marketing directly to patients can drive demand for the company’s products within the areas of joint prostheses, incontinence and obesity surgery. We would be grateful if you could answer the enclosed questions (next page). This would be of invaluable help in writing our thesis. After the thesis is written and has been corrected by our supervisor, it will become a public document. Therefore, please indicate in the end of the questionnaire if you would like to be anonymous.

Sincerely yours,
Sara Strandberg & Vlad Mecea
1. What is your name?

_________________________________________________________

2. What profession do you have?

_________________________________________________________

3. How long have you been working within your profession?

_________________________________________________________

4. Do you know if your patients are using the Internet to seek information about their condition/complaint before their visit at the hospital?

_________________________________________________________

5. If yes, do they have (as a result of their knowledge) high demands on the latest and sometimes the most expensive treatment?

_________________________________________________________

6. Are these demands too high and have they created unrealistic expectations?

_________________________________________________________

7. How realistic and medically correct is the information you get from the patients?

_________________________________________________________

8. What age group would you say is the one that seeks most information on the Internet?

_________________________________________________________

9. Do you have any idea about where the patients are seeking the information from?
   - Do they use search engines, for example Google?
   - Other relevant websites, in that case, which?

_________________________________________________________
10. Has this new information channel, where the patients seek information on the Internet by themselves, changed the relationship between doctor and patient?

_____________________________________________________________________
_____________________________________________________________________

11. If ”yes”, to what extent?
   - More satisfied patients?
   - More secure patients?
   - Etc.

_____________________________________________________________________
_____________________________________________________________________

12. Does a well-informed patient make your work easier?

_____________________________________________________________________
_____________________________________________________________________

13. If”yes”, to what extent?

_____________________________________________________________________
_____________________________________________________________________

14. Does a well-informed patient make your work more complicated?

_____________________________________________________________________
_____________________________________________________________________

15. If”yes”, to what extent?

_____________________________________________________________________
_____________________________________________________________________

16. Would you like to be anonymous?

_____________________________________________________________________
_____________________________________________________________________

Thank you for your devoted time!
APPENDIX 2: The Swedish version of the questionnaire

Hej!
Vi är två studenter från Uppsala Universitet som skriver examensarbete i företagsekonomi om hur marknadsföring via Internet kan öka efterfrågan på medicintekniska produkter och/eller metoder, inom områden som t.ex. höft- och knäproteser, inkontinens och fetma. Vi skulle vara väldigt tacksamma om Ni ägna lite av Er tid för att svara på några frågor (på nästa sida), som kommer att vara till ovärderlig hjälp i vårt uppsatsskrivande. Efter att examensarbetet är färdigskrivet och godkänt av vår handledare, kommer det att bli en offentlig handling. Vi skulle därför vilja att Ni anger i slutet av enkäten om Ni önskar vara anonym.

Med vänliga hälsningar,
Sara Strandberg & Vlad Mecea
1. Vad heter Ni?

2. Vilken befattning har Ni?

3. Hur länge har Ni jobbat inom yrket?

4. Vet Ni om Era patienter använder sig av Internet för att söka information om sin sjukdom/åkomma inför deras besök på sjukhuset?

5. Om ja, ställer de (till följd av sin kunnighet) höga krav på den senaste och ibland även dyraste behandlingen?

6. Är dessa krav för höga och har de skapat orealistiska förväntningar?

7. Hur realistisk och medicinskt korrekt är informationen från patienterna?

8. Vilken åldersgrupp skulle Ni säga är den som mest söker information från Internet?

9. Har Ni någon uppfattning om vart patienterna har fått sin information från?
   - använder de sig av sökmotorer, t.ex. Google?
   - andra webbsidor och i så fall vilka?

10. Har detta nya informationssätt, att patienten själv söker på Internet, förändrat relationen läkare och patient?
11. I så fall i vilken utsträckning?
   - Nöjdare patienter?
   - Tryggare patienter?
   - Etc.

12. Underlättar en påläst patient arbetet för Er?

13. Om ja, i vilken utsträckning?

14. Försvårar en påläst patient arbetet för Er?

15. Om ja, i vilken utsträckning?

16. Vill Ni vara anonym? ______________________________________________________

Tack för att Ni tagit tid till att svara på våra frågor!
APPENDIX 3: The list of respondents

The following medical doctors have answered our questionnaire:

**Uppsala University Hospital**
Annika Boström Ardin, MD, Vascular Surgery Consultant  
Stephen Butler, MD, Prof. Pain Medicine, Anesthesia and Critical Care Consultant  
Cristinel Constantin Cantar, MD, Urologic Surgery Specialist  
Ursula Dahlstrand, MD, General Surgery Resident  
Johan Heinius, MD, Urologic Surgery Specialist  
Pia Jestin, MD, General Surgery and Trauma Specialist  
Adriana Miclescu, MD, Anesthesia and Critical Care Specialist  
Jan Milbrink, MD, Orthopaedic Surgery Consultant, Total Joints Replacement Specialist  
Magnus Sundbom, MD, General Surgery and Trauma Consultant, Bariatric Surgery Specialist

**Saint Göran’s Hospital**
Birgitta Mörlin, MD, Gynecologic Surgery Consultant

**Karolinska University Hospital**
Asle Hesla, MD, Orthopedics Surgery Specialist

**Sahlgrenska University Hospital**
Maud Ankardal, MD, General Surgery Consultant

**Carlanderska Hospital**
Torsten Olbers, MD, General Surgery Consultant

**Nyköping Hospital**
Magnus Hagmar, MD, Gynecologic Surgery Specialist

**Ersta Diakoni Hospital**
Anders Thorell, MD, Bariatric Surgery Consultant
Anonymous

XXX, MD, Orthopedic Surgery Resident
XXX, MD, Urologic Surgery Consultant
XXX, MD, Gynecologic Surgery Specialist
XXX, MD, Orthopedics Surgery Specialist
XXX, MD, General Surgery Specialist