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E-services and e-communication - contemporary state, usage and perspectives for development : at the example of public healthcare institutions

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**E-SERVICES AND E-COMMUNICATION
– CONTEMPORARY STATE, USAGE AND PERSPECTIVES FOR DEVELOPMENT
– AT THE EXAMPLE OF PUBLIC HEALTHCARE INSTITUTIONS**

Introduction

A trend to popularize e-services, especially within e-administration gets stronger. This forces employees of various public institutions to improve their IT literacy and hire electronic solutions into everyday activity. This article is an attempt to present contemporary state of e-services and e-communication in a context of public health institutions, on the basis of research conducted in December in łódzkie voivodship, and to formulate some future suggestions and possibilities for development of those in the future. Due to the editorial limitations, some information were presented in a shortened way.

1. Methodology

The research¹ was conducted in December. There were 237 institutions analyzed with usage of structured observation method and it means the research cov-

¹ The material for an article is a part of research project: “E-marketing in healthcare institutions of łódzkie voivodship”, realized in cooperation of Department of Marketing, Faculty of Management, University of Łódź and Research and Development Institute of Emanuel Foundation. The research was conducted in December. It consisted of 3 parts: observation of internet activity of healthcare institutions which had their website registered in the database of Health Ministry, personal in-depth interviews with managers of those institutions and telephone interviews with the institutions enlisted without websites. There were 1323 institutions examined.

ered all the institutions which had declared to have a website. The observation card consisted of 6 main forms of e-marketing activity: “Website” analysis with 5 subcategories, “SEM&SEO” with 4 subcategories, “Mailing” with 2 subcategories. Later on there were: “Social media”, “Internet ads”².

2. Commonness of electronic communication tools in healthcare institutions

The percentage of institutions that had their website registered in the database of Health Ministry is shocking and presented at Chart below. As we realize that only ¼ of institutions in Łódź and only 1 in 10 in the region had their website, the problem is specially noticeable. Especially in terms of communication, while the website is the basic form of e-communication³. Such a percentage of institutions which do have their websites may be related to the fact that most of them do not feel the need to build one, because they do already have too many clients and they see no reason to have more. Moreover, the system of financing healthcare institutions convinces for that, because National Health Fund would cover only those costs which had been contracted earlier.

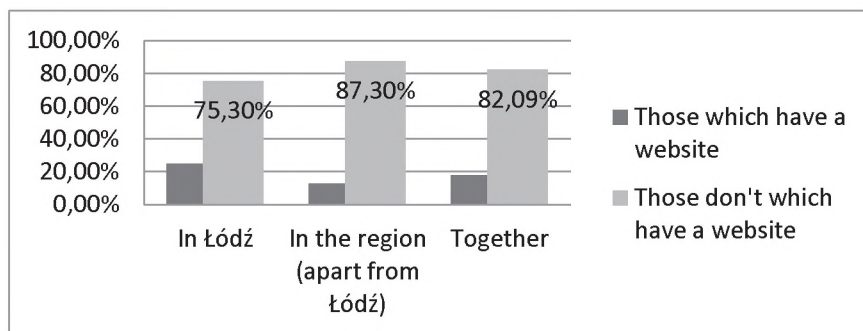


Fig. 1. Commonness of having website in healthcare institutions in łódzkie voivodship

Source: own research.

The websites which are prepared, especially when public health care institutions are concerned, are above average level. Almost half of them (41,35%) is created with usage of Joomla or Wordpress, which on the one hand is an evidence that the institutions were aware that creating the website is crucial and did it in the first possible way, but on the other hand – this may prove that the institutions wanted to limit resources spend on website creation.

² For the editorial limits, the research tool was not presented in a more detailed way.

³ A. Janoschka: *Web Advertising*, John Benjamins Publishing, Zurich 2004, s. 48–71.

Specialists state that content of a website is the factor which influences perception highly and it is the second one after navigation that creates positive or negative impression of the institution's image⁴. Unfortunately, valuable content is rare on the analyzed pages. The information is often limited only to laconic presentation of the offer (54,85%) and presentation of the institution itself, especially its history (64,56%). These might be caused by certainty that the institution is well-recognized and that the product (healthcare service) must be delivered directly, so any questions would be asked in personal contact. Maybe also for that reason, detailed address (76,79%) and phone number (78,48%) are enlisted more often than e-mail (55,27%) and map (55,27%) or contact form (18,57%). A possibility to use internet communicator to contact the institution is extremely rare (4,64%).

The information on vision and mission of an institution are presented by 1/3 of institutions (33,76%), similarly as the operations territory (36,71%). This might be caused by natural limitation of scope of operations just to the closest areas. Only a few of organizations mentioned that they are opened for customers from other countries and this was noticeable also with preparation of other language versions of the website (16,46%). Picture gallery, what is an element boosting reliability of the institution⁵ was used in average by 1 in 3 institutions, equally as to present the employees and the institution (27,85%) and the offer itself (29,11%). There are too small differences to say it with total certainty, but the institutions treat presenting the offer as a more important factor than the conditions in which the service will be delivered and specialists responsible for its quality. This might be related to the fact, that Poland is still a country, where the main reason for choosing a healthcare institution and its services is the price or its lack, what is related to a contract with National Health Fund. Here the circle closes – the institutions that boost their quality of services and e-communication need resources to finance it, so they are relatively more expensive than the other ones. The other ones win the contracts, because they are cheaper, but at the same time, they have no resources to be devoted for marketing, R&D or quality of services improvement⁶. Of course this might be a kind of generalization and simplification, but still the problem exists. Probably also for that reason most of analyzed institutions (83,12%) did not publish the price-list of their services.

⁴ J. Hoffmann: *Consumers' perception of the internet as a product information tool*, GRIN, Santa Cruz 2006, s. 30.

⁵ T.M. van der Geest: *Web Site Design is Communication Design*, John Benjamins Publishing, Amsterdam 2001, s. 131–158.

⁶ S. Golinowska: *Raport: Finansowanie ochrony zdrowia w Polsce – Zielona Księga*, Warszawa 2004, s. 192–212, E. Malinowska-Misiąg, W. Misiąg, M. Tomalak, *Centralne finansowanie ochrony zdrowia i edukacji w Polsce*, Instytut Badań nad Gospodarką Rynkową, Warszawa 2008, s. 71–103.

The graphics was found to be better, because more standard. It was mostly adequate to the institution's profile (72,15%), coherent (75,53%), with no interrupters (76,79%). It did not dominate over the text (70,46%). Nevertheless, logo, which is a graphic symbol helping in market differentiation⁷, was exposed only in 64,56% of institutions. This might be caused by the assumption that it is expensive to create a logo and if we analyze healthcare – it is hard to make it unique and for those reasons some institutions do not create logo at all. About 124 institutions (52,32%) had a graphic which attracted attention and not only had each part of site separated (as 66,24% of institutions), but did also design an interesting top part of page. This area is thought to be a hot-point⁸ and for that reason its attractiveness is extremely important. Some additional or animated elements were used on websites very rarely (4,64%), which might be caused by a deep belief that such elements are related to entertainment and they destroy the image of credible and reliable institution, for which the customers' trust their life and health.

Navigation is the crucial element taken into consideration while analyzing the website. What might be a plus, 67,51% of the examined institutions applied text menu. This simplifies the process of searching information and positioning in search engines (both: inner and outer). Interactive menu (which changes colour after clicking) and intuitive menu (transparent) were used by 66,24% of the examined institutions. More than half of the menus (55,38%) consisted of less than 7 positions, which made navigation simpler. Upper menu was more common (55,38%) than side menu (44,62%). About 1/5 of the examined pages (16,88%) had only side menu, what was caused by using a ready-made scheme delivered by Wordpress or Joomla. At the beginning it hardened usage of the website, because this was unusual solution and user had to start the usage from simply finding the menu. Drop-down menu was applied in 51 cases (21,52%). Such a low result might be caused by simplicity of the most of the pages and this is highly possible that website creators found making such a menu as unnecessary. Only half of the examined institutions (49,37%) used homogenous menu and submenus. This might be influenced with a fact that not all the institutions used submenus at all, so when submenu was used, it was mostly graphically related to the main menu. Inner search engine is used by less than 1/4 of institutions (23,08%). This may be similarly related to simplicity of the pages and belief of the creators that such a solution is unnecessary, because all the data are visible. The buttons "back" (9,28%) and "forward" (7,59%) were used relatively rarely, similarly as breadcrumb path (7,69%). Such solutions are specially advised in complex websites, but they might ease usage even

⁷ J.-N. Kapferer: *The New Strategic Brand Management*, Kogan Page Ltd, London 2008, s. 51–64.

⁸ J. Nielsen, K. Pernice: *Eyetracking Web Usability*, Nielsen Normans Group, Berkeley 2010, s. 113–158.

with the pages that do not have that much of the content⁹. It is especially useful when there is a kind of relation between articles, in example presentation of various medical treatments. Sometimes there was additional side menu with the other sub-categories and cloud of tags. Nevertheless, such a solution is very uncommon. Similarly, the map of a website is extremely rare and used by only 7 institutions (2,95%) for the reasons mentioned in case of breadcrumb path.

As for multimedia published at the websites, the movies are the most popular solution used by 11,39% of examined institutions. What is interesting, the users might see it on the visited website (8,02%) or directly at youtube.com (3,37%). They were mostly the materials presenting delivery of services and research process or research results. Sometimes there were also materials on health-care prevention. They rarely covered the issues of institution's history, present or future. This might be found obvious, because most of customers want to feel that the service is of good quality, not to know what was the process of institution's development. Sadly, no of the analyzed institutions published other multimedia materials, such as: games, music or smartphone applications, which would surely help in educating customers¹⁰.

What might be specially discouraging, only 7,59% of the institutions gave their customers possibility to register the visit via internet and only 0,84% (which are 2 institutions) let their patients check results of medical examination this way. This is specially important while contemporary humans have a chance to do almost everything with usage of internet, but not to use medical services. This is a great obstacle which ought to be noticed by government before implementing an e-administration in the field of public health.

As for SEM&SEO (Search Engine Marketing and Optimization), the part of actions that is intuitive and requires no special knowledge in the field, works well. Most of domains end up with “.pl”, “.eu” or “.com” (95,38%), the addresses are easy to be written (90,77%) or even same as the name of institution (87,69%). Over 6 in 10 institutions (61,57%) uses parts of the name of branch (med, dent, etc.) in an address. It is much worse with usage of keywords. More than 140 institutions (59,50%) used no keywords and meta tags. Those which did mostly mentioned the words related to the services they offer (33,85%), branch in which they operate (33,33%), name of the institution (32,31%), and the name of their city (30,77%). The name of the region was not common (7,17%). It was similarly with meta tags, what is presented on Figure 2.

⁹ M. Lecene: *An Introduction to Search Engines and Web Navigation*, John Wiley and Sons, New Jersey 2010, s. 221–222.

¹⁰ O. Simpson: *Marketing Online Education*, in: K. Klinger: *Marketing Online Education Programs*, IGI Global, Hershey 2011, s. 32–40.

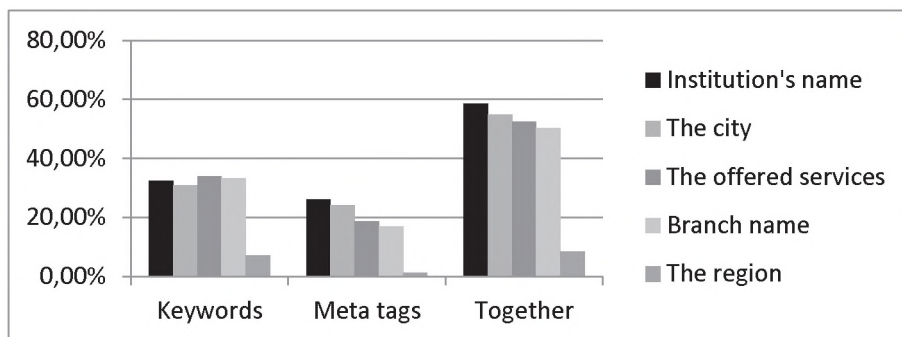


Fig. 2. Keywords and meta tags used by healthcare institutions

Source: own research.

If there were any links used, they were mainly used with direct linking (18,46%), more rarely with crosslinking (6,15%). What is a huge advantage, although the websites were not that impressive as for graphics, almost all of them have a perfect loading time (69,20%). Only 3,38% have loading time longer than 4 seconds and one of them – more than 8 seconds (0,42%). This is very good, because nowadays customers are more impatient and while they do not get the content instantly, they change the website¹¹.

Almost no of the institutions used e-mailing as a tool for electronic communication. They found it inefficient. It was similarly with newsletters. Only 9 institutions (3,80%) used newsletters and only one of them (0,42%) sent it on regular basis. To send a newsletter once a week they used Freshmail system, because they found it cost-efficient and effective as a tool for building relations with the institution.

Usage of social media was usually limited to Facebook¹². However, this is not a very popular communication tool at the market of medical services. Only 21 of the examined institutions (8,86%) run their fan page on Facebook, and only 4 of them (1,69%) actualize it on regular basis, usually once a day. The content published on the wall, stretches from highly-specialist knowledge in medical field, through actualities, to some funny pictures and sentences, but – always related to the field of activity of the institution. An example of very well governed fan page is the one run by GAMETA Clinic. The information are published regularly, they are

¹¹ J. Selbach: *Proven Methods for Successful Search Engine Marketing*, Axandra, Staudt 2008, s. 232–240.

¹² There are also 4,64% of institutions which use youtube.com, 3,38% which use goldenline.pl and 0,84% – which use twitter.com. Nevertheless for the editorial limits those could not be presented in details. It is similarly with blogs, which are run on regular basis by 3,08% of institutions. Most of institutions that accept it, use Google AdWords text ads, however it is only 5,06% of all the institutions. Google AdSense is less popular.

adjusted to the needs of an average internet user and they cover the topic of main GAMETA's activities. What is more, they exchange "likes" with the other institutions with a similar field of interest. Unfortunately, there are also those who exchange "likes" in a less aware manner. An example is presented on Figure 3.

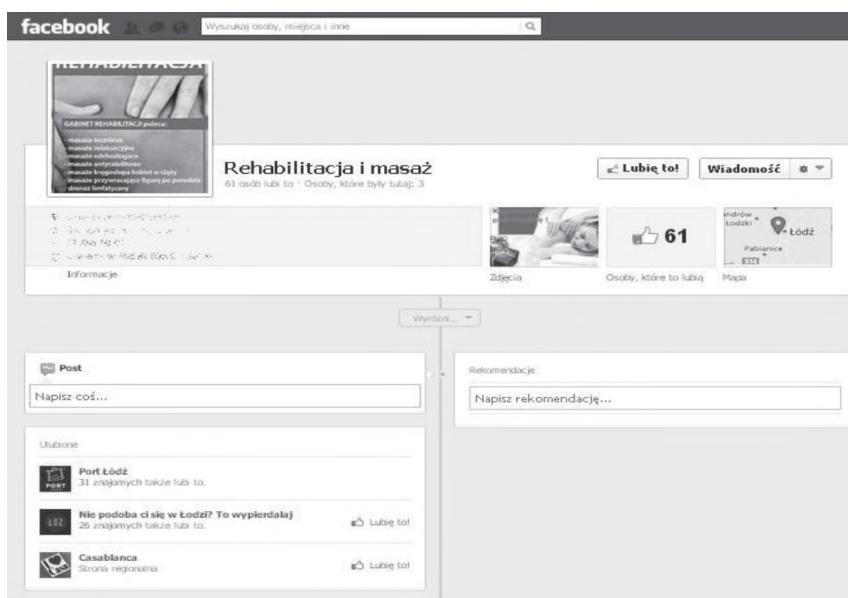


Fig. 3. Facebook fan page of one of the examined institutions¹³

Source: <http://facebook.com>.

The pages that were favourably liked by the company are not only hardly related to their field of activity, but also they include rude words and hazard game. Such relation on the fan page might create negative impression that the institution supports vulgar behaviour, nationalism and hazard, which can influence strongly its image.

Summary and future of e-services and e-communication in healthcare institutions

Most of the institutions use websites to communicate with their clients. Search engine marketing and optimization are less efficiently used, because of requirement of higher specialist knowledge in the field. Newsletters are the tools used to build relationship between patients and the institutions, and for that reason they are

¹³ The proportions of the website were slightly changed, as its size and shape, to make it more suitable to the article format. The name of institution was intentionally blurred.

mostly used by private organizations. Social media marketing is very rarely used in medical services sector, however that may change if there were changes in the system of financing public health services. The main obstacles are weak points of Polish finance public health care system and law¹⁴. As for the future, electronic communication, e-marketing and electronic tools in medical services will be gaining their importance¹⁵. Especially systems of appointing visits, checking medical examination results, self-diagnosing, etc. should be more popular because of their cost-efficiency proven in the world¹⁶. There is nothing more but to state a question, whether Polish Health System is ready for modern world's solutions.

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¹⁴ Art. 56, The Act from 5th December 1996 on the profession of doctor and dentist (Dz.U. 08.136.857).

¹⁵ W. Dworzański, A. Dworzańska, E. Niezabitowska, M. Czerwonka, B. Madej, F. Burdan: *Marketing w służbie zdrowia – konieczność czy chwilowa zachcianka?*, „Polski Mercuriusz Lekarski”, 32/2012, s. 46–49.

¹⁶ T. Ferguson, G. Frydman: *The first generation of e-patients*, „BMJ”, May 2004, 1148–1149.

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E-USŁUGI I E-KOMUNIKACJA – STAN OBECNY, STOSOWANIE I PERSPEKTYWY ROZWOJU

Streszczenie

Rozwój e-administracji i e-gospodarki powinien być związany ze wzrostem popularności narzędzi komunikacji elektronicznej we wszystkich sferach ludzkiej aktywności. Niestety, współczesny stan e-usług i e-marketingu przyczynia się do pewnego rodzaju rozczarowań. Obserwacja instytucji służby zdrowia regionu łódzkiego dowodzi, iż pomimo posiadania przez powyższe strony internetowych i podstawowych technik pozycjonowania, wciąż pojawiają się problemy ze stosowaniem bardziej zaawansowanych form e-marketingu, nie wspominając o e-usługach, takich jak rejestracja elektroniczna czy elektroniczna autodiagnostyka. Niniejszy artykuł stanowi przyczynek do dyskusji na temat wdrażania e-administracji w Polsce, a jego celem jest odpowiedź na pytanie o obecną kondycję i przyszły rozwój e-usług w służbie zdrowia.

Tłumaczenie Beata Gotwald