

THE NEW TECHNOLOGIES IN MEDICAL MARKETING

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Purpose: New technologies impact marketing, specifically, new forms of interaction among consumers and firms, provides new types of data that enable new analytic methods, creates marketing innovations, requires new strategic marketing frameworks. It is important to keep in mind that different technologies can serve these multiple functions at the same time.

Healthcare marketing in 2024/25 will focus mainly on user experience. Medical facilities will be forced to incorporate new technologies into their offerings in order not to be left behind.

Design/methodology/approach: The literature review was used in research.

Findings: The first part of the research analyzes the limitation of health care marketing, especially by Polish legislation. Marketing for medicine 2024/25 will focus mainly on user experience and the quality of services. Advanced algorithms, machine learning, artificial intelligence. All this will turn the medical market upside down. Patients' expectations can now be diagnosed even more accurately. As a result, they will receive even more detailed answers to their questions. To succeed in marketing, it will be necessary to be flexible and ready to implement new technologies quickly.

Practical implications: The research results can help to understand how technology influences

Originality/value: Paper presents new attitude towards medical marketing. It is addressed to healthcare organizations, doctors, business and researchers.

Keywords: new technologies, medical marketing, quality, healthcare.

Category of the paper: viewpoint, literature review.

1. Introduction

Medical marketing is a relatively new field of marketing that focuses on promoting medical products and services. The goal of medical marketing is to reach out to patients, doctors and other medical professionals to increase awareness of available treatment options and medical products and services. Marketing specialists believe that marketing should not be treated as a separate field of activity of an organization. Organizations are characterized by the fact that a marketing approach can be applied in all areas of its functioning, and it is no different in healthcare facilities. The purpose is to show the importance of marketing of medical services,

but also to indicate the directions and methods of action of medical institutions not only to increase the quality of medical services but the satisfaction of the patient-customer of medical services (Nadziakiewicz, 2018).

When creating a quality policy, drawing up an offer, establishing procedures for serving the client-patient, etc., one should keep in mind the marketing, or in other words, pro-client aspect of the organization's activities. Marketing, in fact, fulfills the task of integrating all areas of management in health care institutions, where the main goal (subject) of activity is the customer - the patient. Therefore, the use of marketing activities without appropriate quality standards is unjustified and the time and budget allocated to marketing is then wasted. "Quality has also become the main challenge of modern marketing" (Brilman, 2002, p. 91).

The most important issue for modern marketing is not whether it can be implemented in healthcare facilities, but the extent of implementation. The peculiarities of healthcare make it impossible to uncritically transfer the rules of the classical concept of marketing. Marketing is a certain way of thinking and a certain sensitivity to what the patient thinks, what he expects, what is his level of satisfaction with the service provided to him. This approach to marketing provoked the emergence of the concept of patient-centered care, "patient - centered care" (Ginter, 1998), which assumes that the basis of all decisions in the institution is the patient, and not the functions or goals of individual organizational units. This leads to the thesis that today's healthcare unit offers the use value of its services, which is health and even life. Therefore, the marketing activities of any health care unit should begin with an analysis of the patient's behavior, understanding his decisions and choices, meeting his needs, related to health care (Nadziakiewicz, 2018).

2. Selected problems of the market for medical services.

In modern socio-economic realities, the market for medical services has become a competitive market. Medical facilities have to compete for contracts with both the National Health Fund and external customers. A competitive market is defined as a market in which the value of a service, commodity is determined as a result of free supply and demand (Nadziakiewicz, 2018). In a competitive market, all entities are subject to the same rules and operate in a similar environment. Transactions entered into on the competitive market are subject to civil-legal or customary regulations and information on the services offered is generally available (Kądzielawa, 2004).

The market for medical and health services can be called the processes that take place between providers of medical services - medical entities - and recipients - patients. Medical service is called a health service, i.e. a service aimed at preserving, restoring, saving or improving health, as well as other medical activity resulting from the process of treatment or

separate provisions regulating the principles of their operation (Laws. z dn. 15.04.2011 art. 2, item 10). The provider of medical activity shall make public information about the scope and types of health services provided. The content and form of such information may not have the characteristics of advertising (Law of 15.04 2011 art. 14, No. 112, item 654).

Experts believe the market for medical services not covered by reimbursement from the National Health Fund is growing. According to a recent study conducted by research firm PMR, Poles spent PLN 22 billion on private medical services in 2024. The growing popularity of private medical services is further influenced by online appointments. Research firm PMR has published a projected growth rate of 7 percent in the coming years. It is expected to grow from PLN 22 billion in 2017 to PLN 37 billion in 2024. We are most likely to use both benefits available under the National Health Fund and health services that are not covered by public funding. Under the terms of the Law on Health Care Services Financed from Public Funds, the relevant ministers or the National Health Fund are obligated to finance health care services from public funds. Health care services provided to insured persons are financed primarily through health insurance premiums. The treatment of persons other than the insured who have the right to publicly financed health care services is financed from the state budget. The health insurance premium is monthly and indivisible, amounting to 9% of the premium base (www.gov.pl, 2024).

A 2016 CBOS survey showed that 40 percent of Poles opted for such a “mixed” model. PMR, on the other hand, now estimates that the figure is as high as 60 percent. It is worth noting that those who rely exclusively on private medical services, paid for out of their own funds or through commercial health insurance, represent only a few percent of all patients. Traditionally, the most common use of private medical services is in the field of dentistry. This is, by the way, the only medical field in which those who use services contracted under the National Health Fund are in the minority. The main reason is quite simple - the National Health Fund finances a very limited range of dental procedures. The second most popular medical service outside of the National Health Service is consultation with specialists. The main factor that leads patients to choose the private health care system is the very long waiting time for an appointment under the National Health Service. The average waiting time to see a specialist under the NHF is more than three months, but it is not uncommon for it to be more than a year. When the same services are available almost immediately on a commercial basis, many patients choose the private sector (Nadziakiewicz, 2018).

A much shorter wait to see a doctor is the primary advantage of commercial medical services. For many people, the ease of making appointments through online platforms may be an additional motivation to choose non-NHS services. It is enough to find the right specialist in the search engine, fill in the form and confirm the appointment via SMS or make payment.

"Higher quality of offered services - in addition to economic efficiency and cost reduction, as well as better adaptation of facilities to the needs of the market - is the primary goal of the transformations currently taking place in our country's health care institutions" (Zeler, Kapala, 2004, p. 1).

The health care outlays will amount to PLN 225.2 billion. Taking into account the increase in the expenditure forecast for 2024 from PLN 200 billion to PLN 208.6 billion, as a result of the latest amendment to the National Health Fund's financial plan in July, in 2025.

Six of the most effective ways to market health services.

The development of marketing in the medical services sector is related to improving the quality and availability of medical care and increasing competitiveness in the market. The most important changes that have influenced this development are the improvement in the quality of medical care, the introduction of e-health, the health insurance market and the growing expectations of patients. Patients expect increasingly better medical care and communication with doctors and medical staff. Hence, more and more medical facilities are investing in the quality and marketing of medical services, as well as in education about physical and mental health.

Marketing efforts in the medical industry are primarily about communicating services and building the image of medical institutions. Here are six of the most effective ways to market health services.

1. Webside

Above all, marketing success on the web requires a modern site, designed in accordance with the latest standards of mobility, functionality and the so-called User Experience, or user experience. Many medical offices do not have their own websites or use outdated sites, and this negatively affects the image and trust towards the company.

A medical office's website should contain clear information about the offer, staff, price list, ways to contact and book appointments. An online enrollment system is an added advantage. It is also worth posting reviews of satisfied customers. It can also be useful to prepare a section of the most common questions and answers about the offer, treatments, visits and rules of use.

2. Google website positioning

Today, there is no effective marketing of the medical industry without SEO of a website on Google. The primary goal of SEO is to have your site on the first page of search results, and preferably in TOP3, for queries related to your offer and location, such as "root canal treatment Gliwice", "psychotherapist Gliwice" or "endocrinologist Gliwice". In practice, if a company's website does not appear on the mentioned first page of search results, the chances of a patient coming across it are close to zero.

The main benefit of SEO efforts on a medical institution's website is that it allows it to reach a large audience without the risk of infringement.

Local positioning, i.e. concerning phrases related to the location (city, district, province), is especially recommended for companies operating locally, among others medical offices. Its costs are relatively small, and the effects are visible quite quickly, even after just a few weeks of launching the site. The service involves optimization activities on the site, as well as acquiring valuable links leading to the site or managing customer reviews.

3. Google My Business profile

Improving the online visibility of a clinic or practice can also be achieved by setting up a Google My Business profile. This is a platform where you can choose what information about your business is available in the search engine and on Google Maps. For medical services, the profile includes contact information, hours of operation, photos, customer reviews, and short testimonials. A well optimized business card is an excellent support for local positioning.

4. Social media

The medical industry is no exception: creating clinics or practice profiles and effective social media marketing can bring huge benefits. However, it is worth choosing carefully which social media platforms to be active on. Depending on your target audience, a presence on Facebook, Instagram or YouTube would be a good idea.

Social media provides an opportunity to build a positive image of the physician, connect with patients and share valuable health-related knowledge as well as news about the operation of the facility. There are many formats to choose from: short videos, testimonials, posts.

In social media marketing of any industry, it is very important to be systematic and stay in touch with observers. The focus should be on publishing content regularly, responding to feedback and comments, and responding to messages received.

5. Medical content marketing

Medical content marketing is a tool that is still not widespread enough, but extremely effective and allows you to build a position of authority in the medical market. First of all, it is worth taking advantage of a well-known trend here: Poles are specialists in searching for advice from Dr. Google :). They seek treatment methods on their own, use search engines to find diagnoses and solutions to their health problems. Your medical brand's website and social networks can be a reliable source of answers to their questions.

One solution we recommend is blogging. It gives you the opportunity to publish articles on topics related to health and the services you offer. It will also allow better search engine optimization of the site. In addition, it is an ideal tool to build the image of the doctor as an expert.

6. Appointment booking systems

The most well-known booking and scheduling service is the Famous Doctor portal. It is a service that allows patients to search for doctors and medical facilities, as well as to post reviews and rate the quality of medical services provided. Every day it is used by thousands of people who are looking for information on selected medical specialists and services. Hence, the medical community does not underestimate this channel, and in fact uses it as one of the most important tools for promotion and communication. And since there are potential patients out there, who can easily reach the competition, it is worth choosing to be present and active on this site. Of course, it is not the only e-service system of its kind, but it is by far the most popular.

3. New Technologies in Marketing.

Technology is defined as scientific knowledge and its applications to useful purposes (John, Weiss, Dutta, 1999) so technology can be related both to the product or the service that follows from the scientific knowledge and to the knowledge itself, it avoids the necessity of distinguishing between the product or service (e.g., chatbots) and the technology (e.g., artificial intelligence [AI]) it encompasses, which is, at times, impossible to do (Glazer, 1991). Nowadays technology changes rapidly, the term “new” is referring to recent applications of scientific knowledge that have not been replaced by others. In other words, technology is “new” when it is early in the adoption cycle for organization and client of marketing services.

Integrating all these considerations, new technologies can be defined in marketing as scientific knowledge and its application in the early adoption cycle for firms or consumers with the potential to influence the activity, institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients-patients, partners, and society at large.

Four Ways New Technologies Impact Marketing

At a high level of abstraction, can be observed new technologies impact marketing: four specifically, new technology:

1. supports new forms of interaction among consumers and firms,
2. provides new types of data that enable new analytic methods,
3. creates marketing innovations,
4. requires new strategic marketing frameworks.

It is important to keep in mind that different technologies can serve these multiple functions at the same time.

Text Analytics

Text analytics involves the automatic extraction of information from unstructured written sources performed by a computer to discover new information. This technique combines multiple disciplines (including natural language processing), and through its use, unstructured data changes its format into one that both humans and computers can understand, which has a positive effect on streamlining many processes (Ranjan, Prasad, Mane, 2021) Text analytics can be used for both prediction and understanding (Berger, Humphreys, Ludwig, Moe, Netzer, Schweidel, 2019). In both cases, it can be used to gain knowledge related to individuals (for example, assessing a customer's satisfaction with a product or service, or the likelihood of using a company's services again), as well as a firm, or a market. By using text analytics for prediction, marketers can, for example, gain knowledge about what type of customer is most likely to perform a given activity.

Voice Analytics

The objective of voice analytics is to extract voice data and analyze it using speech recognition tools (Ngai, Wu, 2022). For this purpose, a speech recognition system is created that allows a machine to understand and execute voice commands after first identifying spoken words and converting them into another format (Kumaran, Rangaraj, Siva Sharan, Dhanalakshmi, 2020). During the voice recognition process, a microphone in the user's device registers input data (sound waves), which are then converted into a digital signal so that they can then be further analyzed by a computer (Rawat, Gupta, Kumar, 2014) The goal of an automatic speech recognition (ASR) system is to extract relevant data from the speech signal and to enable the computer to correctly interpret the spoken words and their meaning (Regulski, Nowak, 2013). The processes essential for speech recognition are feature extraction (removing unnecessary information from the data without losing relevant information), acoustic modeling (generating words based on sound waves), decoding (deciding on the sequence of words in an utterance), and pronunciation modeling (comparing the content generated by the acoustic model with the content of the dictionary and creating the final result) (Rawat, Gupta, Kumar, 2014). In marketing, speech recognition is used in voice assistants such as Amazon's Alexa (Hu, Gong, Lu, Ding, 2023). Voice assistants (VAs) are able to communicate with users using spoken language because they can both speak and listen - the natural language generation is responsible for the speaking function, and the natural language understanding is responsible for the listening function (Hu, Gong, Lu, Ding, 2023) VA is be used for so-called voice shopping, during which the consumer utters a request with information about what they would like to purchase, and the VA recommends products that meet their needs; if the purchase is approved, the VA can also help with the purchasing process, as well as tracking the shipment (Hu, Gong, Lu, Ding, 2023). It helps to find needed service or doctor appointment.

Image Analytics

The objective of image analytics is to extract information from digital images using various techniques (for example, classification or clustering), and its application can be found in marketing activities related to analyzing data such as human faces, or visual elements of brands. Areas of marketing where image analytics can be applied are product design, advertising, branding, the online shopping experience, and the consumer perspective. In the case of product design, the study can focus on creating novel designs, as well as on measuring the uniqueness of a given product compared to other average products, examining how a given product design can influence customers' perceptions, or how it can be personalized to individual customers (Dzyabura, Kihal, Peres, 2021) (In the case of advertising, image analytics can be a tool to measure the originality and effectiveness of an ad by comparing it to other successful ads, to assess which visual elements influence certain customer behaviors, or which advertising elements are more tailored to which customers (for example, potential customers or customers who make a subsequent purchase) (Dzyabura, Kihal, Peres, 2021). Image analytics in branding, on the other hand, can be used to examine how visual representations can influence brand perception, and what associations they evoke (Dzyabura, Kihal, Peres, 2021). It is often used by dentists and commercial plastic surgeon to show their results and using photos.

Visual identification

The process of visual brand identity involves a variety of activities aimed at differentiating a company through the use of distinctive visual elements. These elements include, for example, a logo, color palette or font. Its main goal is to create a consistent and easily recognizable image. This is important as part of a marketing strategy, as it contributes to building brand awareness, maintaining customer loyalty and differentiating ourselves from competitors. The brand visual identity is very important. For example: Color increases brand recognition by up to 80%. In order for the visual identity of a medical brand to be effective, it is necessary to develop it carefully and thoughtfully. A company's branding should reflect both its personality and its operating context. If the company wants client patients to be recognized it is essential to ensure good quality branding. Especially in 2024 where online presence is especially important.

Video Analytics

Video analytics is a tool that allows marketers to obtain meaningful information from videos that are needed for decision-making. Video analytics can be used as a tool for making decisions about store layout, staff scheduling, display location, traffic flow, or performance measurement. An example of a system used for video analytics is IVA (Intelligent Video System), which automatically processes and interprets live or recorded videos without the need for human intervention (Dzyabura, Kihal, Peres, 2021).

4. Improving the quality of medical services through marketing

Quality improvement requires marketing support (Nadziakiewicz, Mikołajczyk, 2019), which is evident from the very definition of quality, which is customer-oriented (Hamrol, 2018). A patient using medical services expects a product, i.e. a service that conforms to the parameters about which he or she has been previously informed and a reproducible level of quality of these services. Both quality and marketing are directed in their activities and goals towards the recipient, the user.

When establishing a quality system, information about the customer is essential. A facility is not able to define what the quality of its products or services is until it determines what patients' expectations of quality are. It cannot be considered in isolation from the patient's needs and preferences. It should be realized that the main element of management by quality is to make decisions based on data and not just opinions. Therefore, various methods of surveying patient opinion are used. In this sense: “[...] marketing is the “input of the quality system” – it helps to define customer expectations of quality and to identify differences in these expectations between different target groups of customers” (Opolska, 2002, p. 19).

Marketing also serves: “[...] as it were, at the <exit of the quality system>, to inform customers and other external entities about the quality standards of the medical services provided. It is not enough to create an efficient quality system, describe procedures, train staff. If there is a lack of efficient information conveyed by means of marketing tools that the company conducts certain activities in terms of adjusting the quality of its services to the customer's expectations, then the quality system will become only a dead entry in the strategy of operation” (Opolska, 2002, p. 109).

Marketing activities are aided by information about the existence in a given health care facility - management by quality, implemented ISO and accreditation systems. Marketing is present when defining the quality model for the medical services offered, when creating quality policies in these facilities, and when communicating the established quality policy to patients.

Marketing also proposes instruments for measuring the degree of patient satisfaction with the level of quality offered by a given healthcare facility. The feedback obtained contributes to shaping the organization's quality management. Marketing is a contributor to quality improvement in the institution. But marketing also benefits from good quality in an organization. Quality becomes an image, a market image of the institution and an important argument for the customer - the patient. Building and perpetuating the market image of a healthcare facility are tasks for marketing. It influences the patient's emotions, evaluation and opinion of a particular facility, which guides the decision to choose; this also applies to the services they may use. And all this is due to the existing and well-functioning quality sphere.

The concept of quality leadership strategy is emerging in healthcare units. It involves offering attractive services, that is, putting at the disposal of the patient an offer whose unique character will be noticed and appreciated by him. It can be said that nowadays, any service offered by a healthcare unit, and on top of that, equipped with a guarantee of fast delivery, will arouse the patient's interest and desire to use it. However, this strategy is based on the belief that a standard product cannot satisfy all patients, some of whom are willing to pay more for a service that will perfectly satisfy their needs (Nadziakiewicz, Mikołajczyk, 2019).

The attractiveness of services may be due to their availability or low cost. The implementation of this strategy requires certain measures to be taken by the health unit: creating a brand, taking care of the image of the facility and its services, investing in technology to innovate, a wide range of services in each sector, cultivating close contact with the patient. The aforementioned factors should serve to provide comprehensive service to the patient.

The differentiation strategy was developed to meet the needs of a segment of patients with exorbitant requirements and insensitive to the price of service. Despite a certain attractiveness, however, this perception of quality leads to pathology in the field of health care. A person strives to use a certain proposition in order to get the perfect result of his treatment – even when he cannot afford it.

In health care, the interaction of service providers at different levels of the system and between different participants at the same level is particularly important for achieving the desired treatment outcome. The concept of cooperation also appears in many documents of the World Health Organization, for solving problems, especially in primary health care. At this level, the involvement of both sides of the service process is essential for the development of partnerships.

Marketing has a direct relationship with the process of creating quality in a healthcare facility. Certain typical activities related to this strategy can be helpful in the pursuit of quality creation. The starting element for marketing analysis is patient surveys or a survey of potential patients. Communicate to patients in an understandable way about the way services are provided in the direct service line (registration) or indirectly (brochures, posters, web sides, social media). The actual quality of service, combined with the aforementioned promotional impact - in the long cycle will bring the desired success from the level of service (quality). Promotional treatments will contribute to receiving information on the requirements of patients for quality medical services. It can talk about the formation of quality standards, that is, the implementation of medical services in accordance with them. The basis for the existence of marketing is the idea of the creation of a promise. Taking it literally with regard to the service process, it can be said that in the field of health services it has not been realized. The patient will never be assured that he will be cured. In this situation, a contract cannot be written between the parties, guaranteeing the patient's protection against poor quality service. There could always be a human factor that fails or medical complications. Therefore, a health service can only be considered as a set of professional activities using available medical knowledge and

professional equipment. A broader understanding of the idea of the promise that the health service makes to the patient makes it possible to realize three marketing principles in health care. The first is to make the promise real (external marketing), the second is to create opportunities for medical personnel to keep their promises (internal marketing), and the third is the process of fulfilling the pledge (interactive marketing). The existence of marketing in healthcare facilities is possible when a philosophy of thinking and acting based on trust and commitment is shared by all members of the organization. The ability to create and maintain long-term relationships are strongly linked to the individual predispositions and motivations of staff. It is important to realize that as new market solutions emerge, the importance of marketing in medical facilities increases. The patient-provider relationship should be based on trust and commitment between the parties. To the patient's good perception of the quality of services, the implementation of a quality management system contributes. Promotion of patient education and effective communication are examples of recommendations. The implementation of marketing in the sphere of medicine is the launch of a mechanism, which is a certain concept of operation in the market realities of health care facilities. This will contribute to the move away from completely free services provided.

5. Summary

Commercialization of healthcare organizations is taking place, so a new marketing understanding of health care services is emerging. For health care facilities, a marketing understanding of service will involve the ability to combine concern for meeting patient needs with an economic approach to facility management. The concept of marketing is an increasingly common tool in healthcare. Today it is difficult to imagine functioning in the modern medical marketplace if such activities are not consciously undertaken. Facilities seeking to increase their advantage over competitors must develop and implement marketing strategies, and the constraints that exist cannot be an excuse for failing to take appropriate action. New technologies in marketing can help to win the competition.

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real (external marketing), the second is to create opportunities for medical personnel to keep their promises (internal marketing), and the third is the process of fulfilling the pledge (interactive marketing). The existence of marketing in healthcare facilities is possible when a philosophy of thinking and acting based on trust and commitment is shared by all members of the organization. The ability to create and maintain long-term relationships are strongly linked to the individual predispositions and motivations of staff. It is important to realize that as new market solutions emerge, the importance of marketing in medical facilities increases. The patient-provider relationship should be based on trust and commitment between the parties. To the patient's good perception of the quality of services, the implementation of a quality management system contributes. Promotion of patient education and effective communication are examples of recommendations. The implementation of marketing in the sphere of medicine is the launch of a mechanism, which is a certain concept of operation in the market realities of health care facilities. This will contribute to the move away from completely free services provided. Commercialization of this area is taking place, so a new marketing understanding of health care services is emerging. For health care facilities, a marketing understanding of service will involve the ability to combine concern for meeting patient needs with an economic approach to facility management. The concept of marketing is an increasingly common tool in healthcare. Today it is difficult to imagine functioning in the modern medical marketplace if such activities are not consciously undertaken. Facilities seeking to increase their advantage over competitors must develop and implement marketing strategies, and the constraints that exist cannot be an excuse for failing to take appropriate action.

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