Strategic marketing planning
in secondary healthcare institutions

Miroslav Kendrišić

Faculty of Organisational Sciences
University of Belgrade
Belgrade, Serbia
miroslav.kendrisic@gmail.com

Artur Bjelica

Faculty of Medicine
University of Novi Sad
Novi Sad, Serbia
artur.bjelica@mf.uns.ac.rs
0000-0002-1219-4936

Branka Rodić

Academy of Applied Studies Belgrade, The
College of Health Sciences
Belgrade, Serbia
brodic@gmail.com
0000-0003-1965-3899

Dušan Višnjić

Faculty of Organisational Sciences
University of Belgrade
Belgrade, Serbia
dusan.visnjic15@gmail.com

Tamara Đorđević

Faculty of Organisational Sciences
University of Belgrade
Belgrade, Serbia
djordjevic.tamara2@gmail.com

Abstract— The subject of the research is examining the readiness for introducing CRM and crowdsourcing services in secondary healthcare institutions. The research was conducted in the healthcare institution of secondary type among healthcare workers through an online and offline survey. The obtained results show that healthcare workers are ready and willing to implement innovative CRM services and crowdsourcing models like crowd wisdom, crowdfunding, crowd voting and crowdsensing in healthcare institution. The results present the basis for strategic marketing planning and the introduction of innovative services in the healthcare institution of secondary type.

Keywords - strategic marketing, healthcare, CRM, crowdsourcing

I. INTRODUCTION

This paper is explained briefly why marketing planning has an important role in today's business of secondary healthcare institutions, as patients' satisfaction must be the main objective which requires a thorough knowledge of their needs and expectations.

To understand the impact of marketing strategies on the quality of healthcare services, it is important to understand today's medical consumers who prefer to look for medical information online. With digital marketing, almost all online activities can be tracked and measured. With marketing performance information, healthcare professionals, and healthcare organizations can make a strategic marketing planning how to improve their services. However, to successful manage all of these functionalities and information there is a need to implement a CRM model that aids in fulfilling all this activates at the right time, by the right people with as few mistakes as possible [1].

Customer relationship management (hereinafter: CRM) is an innovative technology that seeks to improve customer satisfaction, loyalty, and profitability by acquiring, devel-oping, and maintaining effective customer relationships and interactions [2]. CRM is very important to be used in healthcare because it improves the service in many ways that finally manifests in saving lives. Some of the services that CRM provides are online consultations, online appointments, clear use of healthcare institutions resources, data management, digital patient history and many more.

Crowdsourcing services can be used to encourage interaction and improve communication among key stakeholders. It includes crowd wisdom, crowdfunding, crowd voting and crowd sensing. These systems can improve efficiency and make business easier in many ways for secondary healthcare institutions. For example, these systems can be used in getting needed healthcare resources, collecting money for curing people, consulting with other healthcare workers as well as creating a platform for sharing patient opinions. Crowd wisdom aggregates collective intelligence and collaboration among medical experts to collaboratively solve medical cases [3]. Crowdfunding is the practice of funding a project or enterprise by collecting small amounts of money from numerous people, typically via online platforms. In the last decade, using the crowdfunding model for covering medical expenses has gained popularity [4]. Crowd voting allows stakeholders to express their opinion and desire through an online platform. This helps medical institutions to gain insight into the opinion of many people in an easy and efficient way. It presents democratization in decision-making by including all stakeholders [5].

This research examines the healthcare workers' readiness for introducing both CRM and crowdsourcing services in secondary healthcare institutions. The results should provide insight into new innovative services that could improve the e-business of healthcare institutions, communication among stakeholders, and strategic marketing planning.

II. STRATEGIC MARKETING PLANNING IN HEALTHCARE

A. Strategic Marketing Planing

Planning is a coordinating activity that prioritizes giving focus to the organization's activities. Strategic and calculated decisions are made at corporate and functional levels. While the form and presenting style of marketing plans can be different, a common purpose is shared – to identify, select and implement the right marketing activities. Strategic marketing planning helps healthcare institutions to determine the future direction of business improvement. Defining time periods, cost, profit, products, and customer-related goals give a proper framework for the organizational directions. A marketing mix consists of: product strategy, prices, distribution, promotion, advertising, sales, controlling & monitoring, and ethical considerations [6].

Each of these segments is crucial in providing healthcare in an effective and economical reasoned way. New technologies can improve data collecting, data analysis, enable multichannel communication, CRM and application of digital marketing strategies. By improving these processes, the whole business effects can be tracked in real-time and can significantly affect strategic marketing planning. It is important to analyze, determine and select which new technological features and models could and should be implemented to benefit the operation of the healthcare system.

B. Aplications in Healthcare

Before defining any action plans in any segment, it is important to define a clear goal for the strategic marketing plan. Healthcare institutions can have many different goals for example:

- A marketing goal would be - to improve access to counseling services to all members of the local community.
- A business goal would be - to increase the number of new clients by 10%.
- An operational goal would be – to add seven internal surgeons to the medical staff of the center by August.
- A customer-oriented goal would be – to improve patient-doctor communication channels.

Selected goals and objectives must be reflective of and consistent with strategic planning. Taking into account current capabilities and newly acquired capabilities healthcare institutions can define and prioritize goals in defined timeframes. By elaborating and determining each part of the previously described marketing mix healthcare institutions can focus on any goal and bring it to fruition.

C. Advertising and promotion

In public healthcare systems, the decision-making process is very centralized. This is very hard for secondary healthcare institutions to make decisions when it comes to product strategy, prices, distribution, sales, controlling & monitoring and ethical considerations. On the other hand, advertising and promotion are areas where they have the most autonomy.

Advertising is primarily done using the secondary healthcare institutions' website. The visual design is traditional, and the focus of the user interface design is functionality. The content mainly focuses on providing information about the secondary healthcare institution concerning services, work hours, employees, location, and other practical information like news, projects, donations and job offerings. However, there is an opportunity to expand this in numerous ways. By expanding the communication with clients to social media platforms and making it interchangeable to use these channels, patient's user experience could be improved. Furthermore, improving this communication creates an opportunity to better include the patients in many activities the healthcare institutions carry out. For example, fundraising, planning new initiatives, sharing experiences, etc. Successfully combining social media, a marketing idea and the healthcare institutions website has been proved very successful before [7].

III. CRM IN HEALTHCARE

A. Customer relationship management

From a healthcare point of view, CRM can be defined as an approach to learning about patients in order to communicate appropriately, and to build good relationships in order to deliver timely information, with the patients' results tracked to make necessary adjustments [2].

Customer relationship management is especially important in healthcare because patients, their health and satisfaction are an indicator of the success of the operations of the health institutions. Demand for health services has increased due to the extension of life expectancy, but also the level of education of the population. In addition to demand, expectations are also growing, related to the outcome of the service, quality of service and attitude towards the patient. Next to modern equipment and the expertise of employees, the patient also expects appropriate treatment: kindness, respect, a sense of security and trust. These trends are global, and as such have caused healthcare facilities around the world to seek assistance in implementing CRM methodologies and technologies.

Application of CRM technologies in a public healthcare system is different than in a private one due to decision making autonomy [8]:

■ Collection of detailed patient data. Aggregating information such as the history of treatment, results of various tests, laboratory analyzes, recordings, smart device health measurements, and a family history of illness would allow health care providers to offer better, more specialized and timely care.

■ Educating patients and raising awareness of the importance of screening. One of the ways to improve health, not only in a specific institution but in the whole of Serbia, is a transfer from curative to preventive. Disease prevention or at least early detection of the disease would significantly reduce, above all, the death rate from curable diseases, but also the cost of treatment the health care system of Serbia, which is in itself over-indebted. To achieve this, the first step is raising the health education and literacy of the population, and then educating people about the importance of regular preventive examinations.

■ Improving efficiency. Excessive reliance on human labor can lead to missed activities, data entry errors, duplicate entries, incorrect entries and archiving errors. With the introduction of the CRM system, the process of entering and monitoring business simplifies, and the number of errors is minimized. It is possible to increase efficiency and influence patients as well, by sending reminders for upcoming examinations and requests from the patient to confirm or cancel the arrival within a specified period.

CRM can contain multiple functionalities focusing on communication between different stakeholders. It also opens an opportunity of integrating various crowdsourcing models in the operational structure of healthcare institutions.

B. Crowdsoursing services in healthcare

Crowdsourcing is a way of obtaining information or input into a task or project by gathering the power of a large number of people, normally via the internet [9].

Models of crowdsourcing that can be implemented in healthcare services are crowd wisdom, crowdsensing, crowdfunding and crowd voting.

Crowd wisdom aggregates collective intelligence and collaboration among medical experts to collaboratively solve medical cases. For example, CrowdMed platform uses the crowd wisdom model for collaboration among an interdisciplinary team of medical experts with an aim to provide knowledge and skills for saving lives [3].

Crowdfunding is the practice of funding a project or enterprise by collecting small amounts of money from numerous people, typically via online platforms. In universal healthcare systems, medical crowdfunding is a viable option to finance alternative, complementary, experimental and scientifically poorly supported therapies not financed by the health insurance fund. Further analysis of the most common diseases and disorders listed in crowdfunding campaigns might provide guidance for national health

insurance funds in extending their list of funded medical interventions [4].

Crowd voting allows stakeholders to express their opinion and desire through an online platform, too. This helps medical institutions to gain insight into the opinion of many people in an easy and efficient way. Delegating the right to participate in the solution of minor local problems, authorities make strategic decisions on their own, without relying on the resources of a "smart crowd" [5].

C. Digital marketing strategies in healthcare

The application of digital marketing strategies improves communication between healthcare institutions and stakeholders. Digital marketing strategy involves the application of various techniques such as e-mail marketing, viral marketing, social media marketing, affiliate marketing, loyalty programs and others. Through social media, patients can be provided with information on disease prevention, doctors' advice can be provided, doctors can exchange opinions and experiences from practice an in this way improve healthcare [10].

IV. READINESS OF INTRODUCTION CRM AND CROWDSOIURSING SERVICES IN SECOND-SARY HEALTHCARE INSTITUTION

A. Research context

This research examines the willingness of healthcare professionals to use CRM systems as an innovative approach to managing relationships with patients, and readiness for adopting innovative crowdsourcing models for doing business in secondary healthcare institutions. For crowd wisdom, we tested if health workers are ready to use collective opinion as one of the ways for finding the answers to the health problems of their patients.

In the context of crowdfunding, we tested if the hospitals are ready to collect funds for the necessary equipment such as various appliances, beds and other needed resources by donation of all stakeholders interested in participation. Crowd voting, a democratic way of making important decisions, is one of the possibilities that would help the employees to express their needs.

B. Sample

The research was conducted through surveying healthcare workers of a secondary healthcare institution. The respondents were people in different positions (doctors, nurses…) and of all age groups. By using both online and offline questionnaires we collected a sample of 80 respondents.## C. Instruments

Questionnaire used in this research consists of twenty

questions that are divided into three main parts.

The first one is a description of CRM and crowdsourcing services in a secondary healthcare institution. Here, respondents can be introduced with keywords. Therefore, the whole concept of how a new website should look, with all its functionalities, is described.

In the second part of this questionnaire, we wanted to collect demographic data of our respondents. This part consists of five questions and gives us answers on what their occupation or age group is.

The final part consists of fifteen questions that examine how much health workers are willing to work in a new environment that would use the implemented CRM system. The questions cover all the functionalities that the new site should have. Including all crowdsourcing systems. Possible answers in this part are formed using the Likert scale.

V. ANALYSIS OF THE RESULTS

A. Results sample

In the conducted research, 80 health workers were examined, 72.5% of whom were women and 27.5% men. The respondents are of different age groups from 21 to over 50 years old. Most respondents were between 41 and 50 years, making up 35% of the total number. Second largest group are people over 50 years, making up 33.5%. Seventeen respondents are people from 31 to 40 years, and the youngest eight respondents have between 21 and 30 years. The level of education of the respondents varies and includes doctors, nurses, and technicians.

B. Research question

Table 1. Analysis of all survey question

Questions	Mean	SD	Validation of hypothesis
Do you agree that the introduction of CRM services would improve the communication and organization of the hospital's business activities?	4.575	0.75	Yes
Do you think that an integrated platform with all the important information about the patient (health picture, age ...) would ease your work?	4.7	0.48	Yes
Are you ready to take the time to answer the patient's questions on the website and write useful tips related to a topic in the field of medicine?	4.2875	0.96	Yes
Do you think that online consultations could be a more efficient form of communication in certain cases	4.3875	0.81	Yes
Are you ready to provide new ideas for solving problems in the health institution, solving complex medical cases or launching initiatives for the introduction of new healthcare services?	4.4	0.85	Yes
Would you use the "Collaborate" functionality to consult with colleagues?	4.7125	0.5	Yes
Would you use the "Survey" option to contribute in the form of voting in support of he initiatives within your healthcare institution?	4.525	0.87	Yes
Do you think that a newsletter would be a useful way to inform the patient about current topics?	4.63	0.69	Yes
Would you like to get the opinion of patients about your work?	4.525	1	Yes
Do you think that the scheduling of examinations, could speed up and ease the existing way of working?	4.7875	0.49	Yes
Do you think that crowdfunding would improve the financing of treatment of special cases or projects aimed at improving the business of the health institution?	4.3625	0.87	Yes
Do you think that crowdsensing and the information you get through this service would improve your decision-making when treating patients?	4.2	1.08	Yes
Do you think that crowdwisdom and this type of collegial communication would improve the success in solving health cases at the departmental level?	4.4375	0.89	Yes
Do you think that crowdvoating would improve the decision-making process related to improving the business of a health institution?	4.475	0.67	Yes
Do you think that connecting the website with social networks would improve communication between healthcare professionals and patients?	4	1.25	Yes
Do you have satisfactory access to electronic devices and the Internet in your workplace in order to use the described functionalities?	4.33	1	Yes

The first part of the survey is demographic one, questioning sex, age group, educational level and the professional position. Research questions are designed in the way to analyze the level of readiness of healthcare workers to introduce CRM as well as crowdsourcing systems. Questions encompass all crowdsourcing systems – crowd wisdom, crowd voting, crowdfunding and crowdsensing.

Our main hypothesis is that the majority of respondents are ready for the implementation of all CRM and crowdsourcing functionalities.

C. Analysis of results

The mean value for all questions is equal to or above 4 meaning that respondents agree or strongly agree with the given statement for introducing CRM or crowdsourcing services. Implicating those respondents agree with implementing this functionalities and models to improve the promotion and marketing segment of strategic marketing planning.

The standard deviation is mainly below one, meaning that the majority of respondents agreed and answered the same. Also, deviation from the expected value is small.

VI. CONCLUSION

Through its specificity, healthcare marketing is an interdisciplinary field because it uses certain concepts, methods, and techniques specific both to classical and social marketing. The effectiveness of its application can be found in the image of a healthy population, greater satisfaction of patients, better communication, a clearer picture of needs that need to be fulfilled, etc. The application of marketing in the field of healthcare was imposed by the problems in the health of the society and outdated and not so efficient healthcare systems.

This research is focused on strategic marketing planning in secondary healthcare systems. By surveying healthcare workers, it was tested the readiness for introducing both CRM and crowdsourcing services. The survey was conducted on a group that has different demographic characteristics; therefore, the outcome is relevant.

Crowdsourcing systems are inseparable part of CRM and include different models. Crowdsourcing has many benefits for both patients and healthcare workers. It is rapid, low cost, and can collect a huge amount of information from a large number of people. In particular, there is potential for crowdsourcing to capitalize on the input of interested and fit individuals who have the best ideas and bring a diverse set of skills and backgrounds to bear on the current task [11]. In this paper, it was described how crowd wisdom, crowdsensing, crowdfunding and crowd voting can be used to improve current healthcare system.

The result of the conducted survey shows that healthcare workers are willing to start using these services in their daily work. They consider that these systems are needed in order to increase efficiency and make work easier. These results and the conducted statistical analysis serve to determine further steps for strategic marketing planning in a secondary healthcare institution.

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