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Research of ways to improve the effectiveness of remote sales in pharmacies

Aim. To audit the websites of pharmacy chains to identify the main problems and directions for improving the effectiveness of the sale of medicines using information and communication systems remotely.

Materials and methods. The content analysis, desk research methods, logical summarization of results, and the graphic method were used to achieve the goal. Data from website analytics were used for the analysis.

Results. Six sites of pharmacy chains in Ukraine have been analyzed. It has been found that on average one user views three pages per session, the duration of the session is one minute on average, and the buyer on average collects a basket of four products in the amount of UAH 300. It has been determined that the main login pages are: product page, product list, and main page. It has been determined that search is a key feature of product selection and is used in 15 % of all sessions. It has been found that in 70 % of cases, mobile devices are used, desktops are used in on average in 26 % of cases, and tablets are used in 4 % of cases. It has been determined that, on average, twice as many conversions are made through the desktop than when using mobile devices and tablets. For the analysis, the most common scenarios of user behavior on the pharmacy chain sites have been selected. While implementing the most frequent errors on websites have been identified, when the interface does not respond to important requests of consumers, which affects their purchase decisions. The analysis and systematization of the main errors on the websites of pharmacy chains have been carried out; recommendations for their elimination have been formulated. This will make it possible to increase the effectiveness of information support for electronic sales of pharmacies in accordance with the requirements of proper pharmacy practice, will affect the customer loyalty and the economic indicators of the activity of pharmacies.

Conclusions. Based on the results of the study, it can be concluded that usability errors and factors contributing to growth should not be underestimated since they can significantly affect conversion rates; even a slight rapid change can improve the site's KPIs; it is necessary to make the interface equally user-friendly on different devices.

Key words: site; pharmacy networks; problems; growth points, recommendations.

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Дослідження напрямів підвищення ефективності дистанційних продажів в аптеках

Мета – провести аудит сайтів аптечних мереж для виявлення основних проблем та напрямів підвищення ефективності реалізації лікарських засобів (ЛЗ) з використанням інформаційно-комунікаційних систем дистанційним способом.

Матеріали та методи. Для досягнення визначеної мети було використано контент-аналіз, методи кабінетних досліджень, логічного узагальнення результатів та графічний метод. Для аналізу використано дані аналітики сайтів.

Результати дослідження. Проаналізовано шість сайтів аптечних мереж України. Виявлено, що пересічно один користувач за один сеанс переглядає три сторінки, тривалість сеансу становить одну хвилину, покупець збирає кошик із чотирьох товарів на суму 300 грн. Виявлено, що основними сторінками входу є: сторінка товару, список товарів, головна сторінка. З'ясовано, що пошук є ключовим функціоналом підбору товарів і його використовують у 15 % всіх сеансів. Виявлено, що у 70 % випадків користуються мобільними пристроями, десктопом користуються пересічно у 26 % випадків, у 4 % – планшетом. З'ясовано, що через робочий стіл конверсій здійснюють вдвічі більше, ніж за використання мобільних пристроїв і планшетів. Для аналізу нами було обрано найпоширеніші сценарії поведінки користувачів на сайтах аптечних мереж. У процесі їх реалізації було визначено найчастіші помилки на сайтах, коли інтерфейс не відповідає на важливі запити споживачів, що впливає на їхнє рішення про покупку. Проаналізовано та систематизовано основні помилки на сайтах аптечних мереж, а також сформульовано рекомендації з їх усунення. Це дозволить підвищити ефективність інформаційного супроводу електронних продажів аптек відповідно до вимог належної аптечної практики, вплине на лояльність покупців і економічні показники діяльності аптек.

Висновки. За результатами дослідження можна зробити висновок, що помилки юзабіліті та фактори, що сприяють зростанню, не варто недооцінювати, тому що вони істотно можуть вплинути на показники конверсії; навіть незначна швидка зміна може покращити KPI сайту; необхідно зробити інтерфейс однаково зручним для користувача на різних пристроях.

Ключові слова: сайт; аптечні мережі; проблеми; точки зростання, рекомендації.

Statement of the problem. In the conditions of fierce competition at the pharmaceutical market of Ukraine, the coronavirus pandemic, and martial law, the electronic retail trade of pharmaceuticals and other products of the pharmacy assortment has become widespread, which has also been facilitated by the legislative regulation of this issue. However, the effectiveness of remote commerce in pharmacies largely depends on the structure, attractiveness, and convenience of the site, content, and relevance of posted information; if the interface does not respond to important consumer requests, this affects the consumer's purchase decision and, ultimately, the pharmacy's profit.

Analysis of recent research and publications. Much attention is paid by modern scientists to the functioning of pharmacy networks. Approaches to modeling the optimal strategy for increasing the competitiveness of pharmacy chains of different sizes, methodical approaches to the analysis and assessment of marketing competitive advantages of pharmacy chains, features of effective management of pharmacy chains, the impact of website usability on the intentions of generation Y to shop online, evaluation of the pharmacy as an environment for providing pharmaceutical services, the impact of ease of use on customer satisfaction and loyalty in the online banking sector is highlighted in the works of such scientists as O. V. Posylkina, K. M. Nor, L. P. Dorokhova, V. V. Malyi, and others [1-6].

Identification of aspects of the problem unsolved previously. The analysis of the latest publications from the specified range of problems allows us to conclude that there are no works devoted to the audit of pharmacy sites/ chains and the determination of directions for improving the efficiency of distance trade in pharmacies.
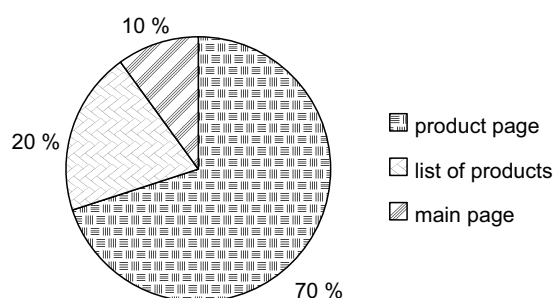
Objective statement of the article. The aim of the work is to conduct an audit of the sites of pharmacy networks to identify the main problems and directions for improving the effectiveness of the implementation of pharmaceuticals using information and communication systems remotely.

Presentation of the main material of the research. According to the data of site analytics, we analyzed user behavior on the websites of pharmacy chains of Ukraine. It has been found that on average one user views three pages per session, the duration of the session is one minute on average, and the buyer on average collects a basket of four products in the amount of UAH 300. It has been determined that the main login pages are: the product page (70 %), the list of products (20 %) and the main page (10 %) (Fig. 1).

Search is a key feature of product selection and is used in 15 % of all sessions. It has been found that in 70 % of cases, consumer uses mobile devices when browsing the website of the pharmacy network, desktops are used in on average in 26 % of cases, and tablets are used in 4 % of cases (Fig. 2).

It is worth noting that the conversion rate when using the mobile version of the site is on average twice as low as for the computer (full) version.

Six popular sites of pharmacy chains and the most common scenarios of the user behavior on similar sites were selected for the analysis. For new users, we evaluated sites according to such general criteria as the possibility of purchasing this product; understanding the advantages of ordering in this particular pharmacy network; understanding delivery and payment methods. In addition, they were evaluated according to specific criteria related to the behavior scenario. According to the first
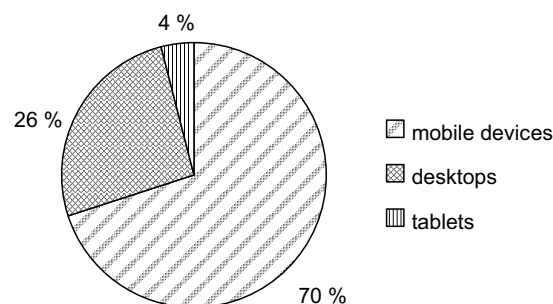

Fig. 1. The analysis of the main login pages

Fig. 2. The analysis of the devices used to log in to pharmacy chain sites

scenario, the user is looking for a product for the treatment of a specific disease or a product with a specific active ingredient. The user can see a list of products matching the request; the ability to select the appropriate product from the list. According to the second scenario, the user searches for a specific product by its name. The user expects to find and view this product; find out the price for a specific dosage or volume. We also went through the path of a regular user in the third scenario when the user entered the name of the pharmacy network in the search results and went to the main page of the site. In this case, in addition to solving general tasks and scenarios 1-2, he expects to see novelties and current offers; the ability to quickly log in to activate the loyalty program; solve tasks from scenarios 1 and 2 through catalog/search or marketing units.

It is very important to take into account the characteristics of behavior of regular and new users. For regular users, the advantages of ordering at a pharmacy are already known, so they may not be relevant. And new information about the courier delivery of medicines (after the adoption of the law) or the availability of masks and essential goods may be critically important.

We also analyzed the sites depending on different options for completing the consumer scenario: placing an order with delivery; reservation of goods in the pharmacy; purchase of goods in one click. After going through all these scenarios in six pharmacy chains, we identified the most common errors on the websites of pharmacy chains and recommendations for their elimination. They are presented in Table.

Table

THE ANALYSIS OF THE MOST COMMON ERRORS ON THE WEBSITES OF PHARMACY CHAINS IN THE DESKTOP AND MOBILE VERSIONS AND RECOMMENDATIONS FOR THEIR ELIMINATION

No.	Error name	Recommendations for their elimination
1	2	3
1	no filters when choosing products	create the following mandatory filters when choosing a drug: active substance; producing country; dosage form; prescription/ non-prescription-
2	irrational placement of filters	important filters should be expanded, minor ones should be hidden
3	the expanded list of subcategories takes up the entire first screen	it is advisable to place only relevant categories and popular filters taking into account priority. Filters should be placed in categories of the last level, and when returning to a higher-level category, display a list of only those subcategories and, which belong to it, and then filters
4	poor formatting of filters (makes it difficult to work with them in the mobile version)	small button size "Filters" makes it invisible to buyers. Violation of the visual hierarchy makes the structure non-linear, due to which the price ranges are difficult to read. The irrational use of space on the left is especially critical for the mobile version considering the screen size. However, 70 % of users use the mobile version, so it is advisable to pay due attention to it, as well as the full version. For convenience, you can add on the button of the selected filter element and make filters structured by priorities across the entire width of the screen
5	most of the screen is occupied by elements that are not important for the user ("hat", banner), and key information is missing	In such cases, all secondary elements should be hidden and the information needed by the user should be presented in the best possible way, remembering that in the mobile version the content is placed compactly. "Breadcrumbs" can be hidden in the slider, the "cap" can be made minimal, the banner can be turned off, displaying the list of products on the first screen
6	There is no information about the product manufacturer on the issue page	It is advisable to place key information for the user on the first page of the screen and outline the main selection criteria

Continuation of Table

1	2	3
7	An inconvenient directory in the desktop	The catalog is a key element of navigation between product categories, whether the user will find the product he needs depends on its structure and convenience. Large gaps between subcategory items and lack of reading direction make searching difficult. An excessively large number of subcategories that do not fit on one screen can lead to the fact that the user may miss the desired item. A convenient catalog will improve and speed up the search. The directory of the second and third levels should be opened sequentially in the direction of reading
8	An inconvenient catalog in the mobile version	There should be enough space between categories to separate one category from another and not accidentally click on both links. Clicking on a category should open a second-level nested directory on a new screen, and the user can see how to go back one step or quickly close the directory
9	product categories and search results by active substance are missing in the search	The consumer has to search for a product among a huge list of relevant requests. When entering a name in the search, both the category and the products corresponding to the request should be displayed. Search should not be underestimated since it is usually used by the most brand-loyal customers. As a result of refinement of this functionality alone, it is possible to increase the search transaction ratio to 75 %
10	search is hidden in the icon and is not available when scrolling the page	Search should be in a prominent place and accessible at any moment since it is used in 15 % of sessions
11	analogues are not displayed in the product card	Product details are a key entry point. On this page, the user expects to receive answers to most of the questions: is this product suitable (including the price), what to replace it with, what are the features of use, is it better to buy here or look for a cheaper one. If there are no answers to these questions on the site, users can move on. If the drug does fit, users are more likely to find an analog from the list of analogues. The active substance must be a reference to dispensing. Analogs should be displayed in the product card
12	the product card does not display a description of possible delivery options and the price of each of them	Before making a purchase, users should understand how, where and when they will be able to receive their order. The product card should contain a description of possible delivery options and the price of each of them
13	Unable to purchase a single blister	Give users the opportunity to buy a part instead of the whole package
14	the need to scroll up to add the product to the cart after reading the instructions	It is necessary to create maximum convenience so that the user, who made a decision to buy after reading the instructions, can add the product to the cart
15	combining the shopping cart and checkout complicates the user's task	When adding a product to the cart, the user expects to see the added product, change its quantity, check the composition of the cart without opening the cart page separately. Combining two tasks on one page: checking the composition of the order and making a decision complicates both these processes for the user. Therefore, it is better to separate these tasks and focus the user's attention on a specific action
16	the pop-up basket attracts attention	the pop-up basket attracts attention, allows the user to focus on the target action – go to the order. The user can go to the shopping cart page, check the product, its quantity and price, and then go to checkout. If the user is given the opportunity to change the quantity in the pop-up cart, he can immediately go to the checkout page, thereby bypassing unnecessary steps and exit points

1	2	3
17	after changing the quantity of the product in the basket, the user does not see how the price will change	After changing the quantity of the product in the cart, the user can see how the price will change by clicking the "Recalculate" button. If the user does not do this, the price of the product is displayed incorrectly, which may lead to leaving the cart. It is necessary to give the user the opportunity to instantly see the price of the product after changing its quantity
18	inconvenient location of the transition to placing an order button	When the button is at the bottom of the page, the user does not see what action he is supposed to take on the page. Place the button at the top pages
19	unclear cost and delivery time	the checkout page where the cost of delivery and order will be clear, as well as what the final amount is made of. The first step focuses the user's attention on personal data. The second step contains comprehensive information about the cost of delivery and its terms
20	full cap website on the checkout page	This error occurs most often since few people think that it is in the header of the site that many exit points from the checkout page are concentrated. And the user can go to the catalog, search or leave the site without completing the order
21	no site header	You need a hint for the user in the form of a phone number or a chat with a consultant, so that you can ask something if there are difficulties with the registration. It is recommended to leave only three elements in the header: logo, page title and contact phone number. Everything else is additional exit points

Depending on the scenarios and stages of user movement, we divided the problems into the following sections: product selection, catalog, site search, product details, adding products to the cart (usability problems at the cart stage), decision making (ordering, quick purchase), repeat visits (main page shortcomings). In each section, we analyzed problems both when using the desktop and mobile versions.

After analyzing the main errors on the sites of pharmacy chains, general recommendations are provided: take care of for users; display the most popular products on the main page; give comprehensive information about delivery options; offer online consultation and home delivery. Care about users should be on all key login pages, it will depend on whether the user stays on a certain site; in wartime, it is necessary to convey to users the advantage of purchasing medicines with home delivery, to explain that it is safer this way; usability errors and growth points should not be underestimated since they can significantly affect conversion rates; even a slight rapid change can improve the site's KPIs; it is necessary to make the interface equally user-friendly on different devices.

Conclusions. Six sites of pharmacy chains in Ukraine have been analyzed. It has been found that on average one user views three pages per session, the duration of the session is one minute on average, and the buyer on average collects a basket of four products in the amount of UAH 300. It has been determined that the main login pages are: product page, product list, and main page. It has been determined that search is a key feature of product selection and is used in 15 % of all sessions. It has been found that in 70 % of cases, mobile devices are used, desktops are used in on average in 26 % of cases, and tablets are used in 4 % of cases. It has been determined that, on average, twice as many conversions are made through the desktop than when using mobile devices and tablets. For the analysis, the most common scenarios of user behavior on the pharmacy chain sites have been selected. After going through all the scenarios in the pharmacy chains studied, the most frequent errors on websites when the interface does not respond to important requests of consumers, and on which the purchase decision depends, have been identified. Of all the sites of pharmacy chains, Pharmacy 911 can be singled out; its interface is quite convenient on all devices, but there are points of growth and errors that can affect the conversion. An anti-example is the ANC site, which is morally outdated and does not look like a modern e-commerce solution. The analysis and systematization of the main errors on the websites

of pharmacy chains have been carried out; general recommendations for their elimination have been provided.

Prospects for further development. Based on the analysis, the key area of growth of pharmacy network sites is the version for mobile devices, it is in it that the main array of potential traffic is concentrated.

Conflict of interests: authors have no conflict of interests to declare.

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