


## MEDICAL CONSULTATIONS IN THE DIGITAL AGE: THE PERSPECTIVE OF DOCTORS ON PATIENTS WHO SEEK INFORMATION ONLINE IN CAMPO GRANDE - MS

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### ABSTRACT

This study evaluated how Primary Care physicians working in Family Health Units (FHU) in Campo Grande, Mato Grosso do Sul, deal with patients who seek health information on the internet before, during, or after consultations. The objective was to analyze the perception of these professionals about the impact of these practices on the doctor-patient relationship, on the conduct of consultations and on clinical decisions. The research is cross-sectional and quantitative, with data collection carried out through an online questionnaire in May 2024. The sample consisted of 33 physicians distributed in seven health districts of the city. The analysis was performed with the aid of Microsoft Excel software (version 2010). The study sought to understand whether the information brought by patients contributes to clinical dialogue or generates conflicts, and how physicians evaluate the quality of this information. Considering the growth in the use of the internet and social networks as sources of health information, the research also discussed the challenges and opportunities that this scenario presents for the SUS and for medical practice in the USFs.

**Keywords:** Internet. Health. Medical services.

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## INTRODUCTION

With the advancement of technology, the way health information is accessed has undergone significant transformations, as have medical care services. The Internet has become an essential resource in this context, allowing the dissemination of health knowledge in a broad and accessible way, overcoming geographical, linguistic and socioeconomic barriers. This evolution has redefined the relationship of individuals with medical information, providing greater autonomy in the search for guidance and clarification about their health. (Nangsangna; Vroom, 2019).

Due to the convenience, immediacy, and interactivity of the Internet, more and more consumers are turning to it for health information. In Brazil, 45% of the population uses the Internet to search for health information online (Hibou, 2023). The number of households with internet access in Brazil reached 90.0%, according to data from the National Household Sample Survey. In absolute terms, there are 65.6 million connected households, 5.8 million more than in 2019 (Gov.br, 2022)

It is observed that the rise of the Internet in the last two decades has altered doctor-patient relationships. Traditionally, the physician was considered the main source of health information; however, many parents now access health information online more easily than their child's doctor (Karatas; Caldwell; Scott, 2022).

There has been a noticeable increase in the search for health information on social media platforms. Social media offers new ways to seek and share health information due to increased accessibility to a wide variety of health data and social support networks, especially beneficial for individuals facing stigmatization and marginalization. Additionally, there has been a significant increase in the use of social media platforms by hospitals and healthcare professionals. The importance of social networks as channels for the dissemination of health information and its impact on the promotion of integral health is also highlighted (Souza; Santos, 2019). However, to harness the potential of social media for health information, individuals must take an active and determined approach to searching for health information online. This search for health information often arises from the need to fill specific gaps in health-related knowledge (Zhao; Basnyat, 2022).

The continuous advancement of health services and policies directly influences communication during medical consultations. With easy access to the internet, patients often arrive at clinics well informed about their conditions, wanting to discuss with health professionals the information they have found online. However, this abundance of data can be challenging, requiring both patients and clinicians to develop skills to navigate and critically evaluate the available information (Saragiotto; Fernandes, 2023).

While healthcare providers continue to be the primary authoritative authority for health information, the diverse social determinants in patient health, including accessibility barriers such as geography, cost, and time, result in patient preference for online research over in-person consultations. Due to their social connection, social networks have become one of the preferred places to obtain information about health and community support (Moretti; Olive tree; Silva, 2012). Studies such as that of Christakis and Fowler (2007) show that peer influences, i.e. friends, family and acquaintances, have a significant impact on health behaviours, often more than almost any other source are disclosed on user-created content platforms such as social media. Furthermore, an individual's competence on the Internet does not necessarily equate to their medical literature. However, whether or not they are considered a liquid mediator in which an agent, be it a person, a technology or an environment, promotes and moderates social interactions in a flexible and dynamic way, social networks facilitate the exchange of information, which can promote dialogue and integrate diverse perspectives in a flexible and adaptive way. While this can be a positive aspect, it also comes with risks, such as a lack of validation of information, which can affect individual health status in unique and substantial ways. Therefore, doctors should not ignore this impact (Forgie et al., 2021)

The use of social media as a source of health information is expanding in contemporary times. Social media platforms offer advantages and disadvantages for health self-care by lay users. The benefits are associated with the ease of finding, accessing, comparing and sharing information. On the other hand, the disadvantages are related to credibility, quality, accuracy, and information overload (Chen; Wang, 2021).

In this scenario, it is essential to analyze informational practices from the perspective of transition between different health contexts, both significant and personal. This approach allows us to perceive that the health context does not follow fixed routines, but is marked by changes and interruptions in information sources. At the same time, it highlights the importance of adapting and building new knowledge bases to face these changes. In this transitory perspective, the tensions associated with the use of social media are intertwined with the tensions emerging from the context experienced, resulting in ambiguous and unknown informational experiences (Brasileiro; Almeida, 2021).

The present study investigates the perspective of physicians from Family Health Units (FHU) on patients who bring information from the internet to their consultations. Patients at the USF are local residents, usually with limited access to specialized care, who seek continuous and accessible care (Murray et al., (2003). Doctors in the USFs, on the other hand, are primary care professionals, specialized in family and community medicine,

who deal with a wide range of health conditions. The sample was chosen due to the relevance of USFs as primary access points and the growing influence of online information on health practices, which should significantly impact the interaction between patients and physicians and the quality of care offered. In addition, the objective is to analyze the perspective of health professionals regarding the research carried out by patients. Other objectives include assessing whether the information provided by the patient influences the course of the medical consultation, describing the perception of physicians about the behavior of users of the Unified Health System (SUS) who seek prior information, and verifying whether this information impacts medical treatment decisions.

## METHODOLOGY

The present research is a cross-sectional study of quantitative character, whose object of analysis are physicians working in the Family Health Units (USFs) of Campo Grande, Mato Grosso do Sul. To compose the sample, the criteria adopted were that the participants had at least one year of experience in the unit where they worked.

Initially, the intention was to reach a total of 62 doctors, considering the total number of USFs in the city — a sample of at least one doctor per unit. However, 33 valid answers to the questionnaire were obtained, corresponding to the professionals who agreed to participate in the research.

Data collection was carried out in May 2024, through a structured questionnaire, consisting of closed multiple-choice questions. The instrument was made available online, and invitations were sent via email and WhatsApp application. The participants were presented with the Informed Consent Form (ICF), as provided for in the ethical standards of health research.

The final sample, therefore, is composed of 33 physicians distributed in different USFs in the municipality. Although it was not possible to include all 62 existing units, the study sought to ensure diversity among the respondents, considering professionals from different regions of the city. The collected data were organized and analyzed using Microsoft Excel software (version 2010), with a focus on presenting the results obtained in a clear and objective manner. The selection of physicians was carried out by clusters, representing a significant sample of health units in the region.

Data analysis began with the quantification of the investigated events, followed by their classification, measurement and interpretation. The statistical analysis was descriptive in nature, using parameters such as mean, median, mode, and quartiles to extract relevant

information. This process allowed a comprehensive understanding of the data collected, enabling significant inferences about the phenomenon under study (Marconi, 2022).

The data were entered and analyzed using Microsoft Excel software, version 2010, as it is a widely accessible and familiar tool for researchers, in addition to being suitable for performing a wide range of statistical analyses. The analysis included the calculation of absolute and percentage frequencies, and the results were summarized in tables and graphs.

The descriptive analysis of the data was conducted with the aid of Microsoft Excel, version 2010, for Windows, version 3.6.2, allowing the generation of a clear view of the distributions and patterns observed in the variables studied.

Physicians who had at least one year of work experience in the FHUs located in the municipality of Campo Grande, in the state of Mato Grosso do Sul, were included in this study.

The potential benefits of this research include the possibility of a deeper understanding of how the information patients search for about their health influences the medical consultation process. This encompasses the impact of this information on the formulation of diagnostic hypotheses, the selection of procedures and treatments, and the dynamics of the doctor-patient relationship. By understanding these effects, doctors will be able to adjust their approaches, offering more personalized and effective care that more accurately meets patients' needs. The research can also contribute to strengthening the relationship between doctors and patients, enabling doctors to learn to better communicate with patients who research health information and to create an environment of trust and collaboration.

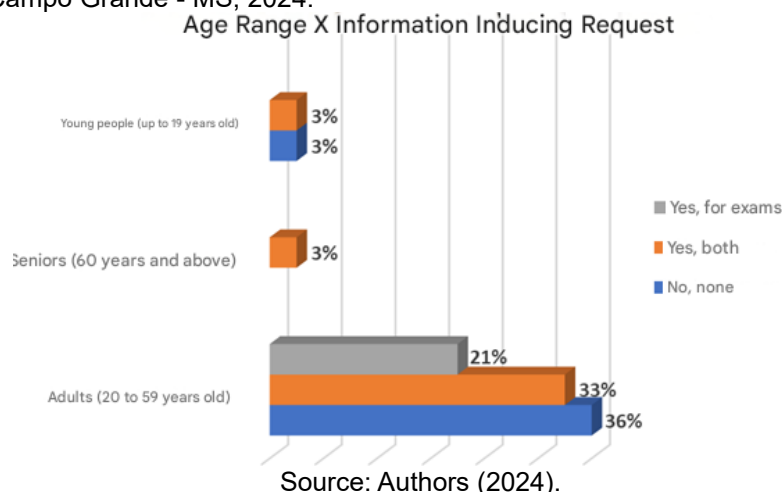
The ethical considerations of the research followed the Resolution of the National Health Council No. 466/12, with the approval of the Ethics and Research Committee, under opinion 6.828.119 - CAAE 78789124.4.0000.0199. All information is confidential and the responsibility of the researchers, which guaranteed the anonymity and privacy of the participants. The form was linked to the research's principal investigator to ensure information security.

## RESULTS

When analyzing whether the information brought from the internet by the patients influenced the request for complementary tests or medications, seven physicians indicated that there was a suggestion of tests by the patients, for thirteen physicians both (tests and medications) were requested, and for thirteen there was no request for any. When

comparing the request for tests and medications with the age group of the patients, it was found that among adults (20 to 59 years), 21% requested tests, 33% requested both, and 36% did not request either. Among young people (up to 19 years old), 3% requested both and 3% did not request either, while among the elderly, 3% requested both medications and exams, as shown in figure 1.

Figure 1 — Comparison of the age group of patients who request tests and medications according to the internet survey, in Campo Grande - MS, 2024.

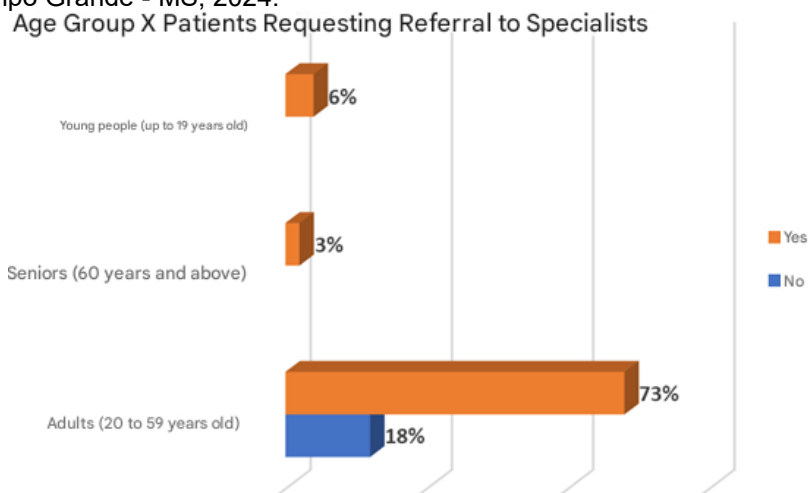


Regarding the occurrence of advice and social support by physicians to patients who attended consultations with information from the internet, it was found that 72.7% of the professionals interviewed stated that they provided advice and support, in contrast to 27.3% who reported not doing so.

The influence of the information obtained on the internet on the request for referrals to specialists by patients was analyzed, and it was found that 81.8% of the physicians interviewed confirmed the occurrence of this practice, while 18.2% reported not having witnessed this situation. Regarding the frequency with which this request occurs, 43.8% of the physicians indicated that it occurs 1 to 4 times, 34.4% stated that it occurs 5 to 9 times, and 21.9% reported that it occurs more than 10 times.

When correlating the request for referrals with the age group of the patients, it was observed that, among adults (20 to 59 years), 73% made the request, while 18% did not; among young people (up to 19 years old), only 6% made the request; and among the elderly (60 years or older), 3% also requested referral, as shown in Figure 2.

Figure 2 — Comparison of the age group of patients who request a referral to specialists after an internet consultation, in Campo Grande - MS, 2024.

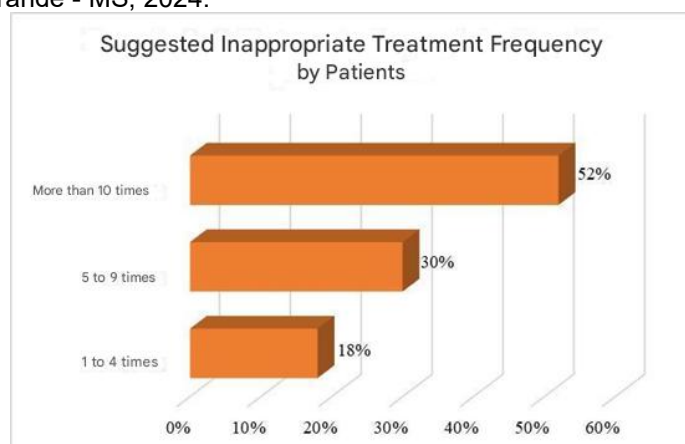


Source: Authors (2024).

The majority of physicians (81.8%) reported that consultations in which patients arrive with information previously taken from the internet require more time, in contrast to 18.2% who did not observe this additional demand for time.

The data revealed considerable variability in the frequency with which patients request inappropriate treatments based on health information obtained from the internet during medical consultations. According to the doctors' responses, 52% reported that patients make these requests between one and four times a month. In addition, 30% of physicians indicated that these requests occur with an even higher frequency, ranging from five to nine times a month. 18% of physicians face more than ten requests for inappropriate treatment per month (Figure 3).

Figure 3 — Frequency of times patients suggest inappropriate treatments according to information taken from the internet. In Campo Grande - MS, 2024.



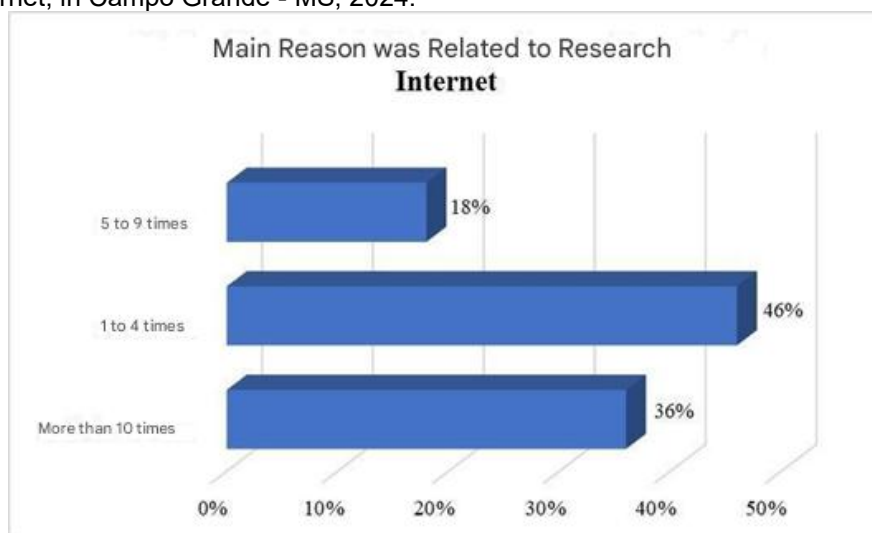
Source: Authors (2024).



Regarding the influence of the information obtained by the patients on the internet about the treatment, 39.4% of the physicians considered that this information facilitated the process, while 60.6% believed that there was no facilitation.

When analyzing the frequency with which patients seek the doctor due to previous research on their health status on the internet, it was observed that 46% of the physicians interviewed reported that this occurs "1 to 4 times" per month, 18% indicated a frequency of "5 to 9 times" per month, and 36% stated that this situation occurs more than "10 times" per month (Figure 4). In weekly terms, 51.5% of the physicians stated that patients seek consultations due to information on the internet "5 times or more" per week, 30.3% indicated that this happens "3 to 4 times" per week, and 18.2% reported a frequency of "1 to 2 times" weekly.

Figure 4 — Frequency of patients in whom the main reason for the consultation is research on their health status on the internet, in Campo Grande - MS, 2024.



Source: Authors (2024).

When asked about the benefits of patients' access to medical information on the internet, 69.7% of the physicians recognized some benefit, while 30.3% did not identify benefits. Among the benefits listed, the following stand out: improved communication between physicians and patients (8.7%), appreciation of the meeting with the professional (4.3%), better patient adherence to the proposed treatment (17.4%), better understanding of the patient in relation to his or her own health status (60.9%) and greater patient autonomy (4.3%), as shown in Table 1 of the frequency distribution of the benefits verified.

Table 1 — Frequency distribution of benefits of internet health research, in Campo Grande - MS, 2024.



BENEFITS	COUNT	CUMULATIVE COUNT	% OF TOTAL	% ACCUMULATED
Better patient understanding of their own health status	14	14	60.87%	60.87%
Improved communication between doctors and patients	2	16	8.70%	69.57%
Better patient adherence to the proposed treatment	4	20	17.39%	86.96%
Valuing the meeting with the professional	1	21	4.35%	91.30%
None of these	1	22	4.35%	95.65%
Greater patient autonomy	1	23	4.35%	100.00%

Source: Authors (2024).

One aspect highlighted by the doctors was the occurrence of serious damage to health resulting from the information found on the internet. According to the reports, 51.5% of the physicians indicated that they had witnessed serious damage to health, as described in the following situations: "Patient used weight loss medication taken from the internet, resulting in liver and kidney damage.", "Patient stopped taking medication on his own (Losartan) after reading something on the internet and evolving with severe hypertensive crises.", "Conjunctivitis resulting from the use of urine in a child's eye for supposed treatment.", "Patient put coffee grounds in varicose ulcer of the lower limbs.", "Patient started antihypertensive because he felt nuchalgia and attributed symptom to hypertension.", "Use in underdosage of the prescribed medication.". While 48.5% did not observe serious damage. Regarding the impact on the doctor-patient relationship, the majority (51.5% of the physicians) believe that the health information brought by the patients harms the relationship, while 48.5% did not perceive negative effects. Among the problems reported are worsening adherence to treatment (1 response), loss of confidence in medical opinion (5 responses), an increase in the frequency of conflicts with the patient (3 responses) and improper self-medication (6 responses), as detailed in Table 2, which shows the frequency distribution of these observed impairments.

Table 2 — Distribution of frequency of impairments to medical consultations due to internet search, in Campo Grande - MS, 2024.

LOSSES	COUNT	CUMULATIVE COUNT	% OF TOTAL	% ACCUMULATED
Increased frequency of conflicts with the patient	3	3	20.00%	20.00%
Improper self-medication by patients	6	9	40.00%	60.00%
Loss of patient confidence in medical opinion 5		14	33.33%	93.33%
Worsening treatment adherence	1	15	6.67%	100.00%

Source: Authors (2024).

Regarding the feelings of physicians when they received information brought by patients from the internet, the results were varied. One physician reported feeling upset, four irritated, ten uncomfortable, three comfortable, thirteen indifferent, and two chose the "none of these" option, as shown in Table 3.

Table 3: Frequency distribution of physicians' feelings in relation to patients who search the internet about their health status, in Campo Grande - MS, 2024.

FEELINGS	COUNT	COUNT ACCUMULATED	% OF TOTAL	% ACCUMULATED
Comfortable	3	3	9.09%	9.09%
Indifferent	13	16	39.39%	48.48%
Uncomfortable	10	26	30.30%	78.79%
Irritated	4	30	12.12%	90.91%
Upset	1	31	3.03%	93.94%
None of these	2	33	6.06%	100.00%

Source: Authors (2024)

## DISCUSSION

The influence of health information obtained from the internet (OHI) in medical consultations has become a growing phenomenon, with direct implications for clinical practice and the relationship between physician and patient. Studies show that factors such as educational level, income, gender, age group, health knowledge, and culture can influence patients' use of this information (Gantenbein et al., 2020; de Looper et al., 2021).

Research conducted by Coelho, Coelho and Cardoso (2013) reveals that a significant portion of patients (73.75%) turn to the internet in search of health-related information, with 56.11% using this resource on a daily basis. In addition, five studies have identified that individuals with a higher level of education and higher income demonstrate a greater willingness to use OHI (Rider, Malik, and Chevassut, 2014).

Among adults, according to the data obtained, 21% requested tests, 33% requested tests and medications, while 36% did not make requests. These data contrast with those of young people (up to 19 years old), of whom only 3% requested tests and medications, and also with the elderly, who presented the same percentage. In addition, Chiu (2011) demonstrated that the cultural environment can also affect health communication, influencing the way OHI are discussed with health professionals.

Studies show that women and younger patients are more likely to seek information on the internet, indicating that communication strategies should be adapted to meet the needs and expectations of these groups (Coelho, Coelho and Cardoso, 2013; Gantenbein et al., 2020). Aref-Adib et al. (2016) also found that young males with psychiatric disorders are more likely to discuss health information with their doctors.

This behavior suggests that adults, possibly due to greater access to technology and greater autonomy in their own health care, are more likely to use OHI to support their medical requests. However, a notable challenge identified by patients is the difficulty in distinguishing reliable sources of information, with 54.6% of respondents highlighting this difficulty (Coelho, Coelho, and Cardoso, 2013).

As highlighted by Bastos and Ferrari (2011), although the internet is an important complementary tool for health education, it should not replace face-to-face medical consultations. The lack of quality control of IHOs and the lack of medical information literacy on the part of patients make decisions based on these data generally anti-scientific, generating difficulties for physicians in interpreting these judgments.

The growing search for autonomy on the part of patients, especially adults, reflects a trend fueled by easy access to health information on the internet. This behavior can be interpreted as an expectation of a more active role in health care. However, it should be noted that access to OHI can also result in misinterpretations, which leads to requests for unnecessary tests or treatments (AFYA, 2023).

A study by Iverson, Howard, and Penney (2008) revealed that 46% of patients modify their health-related behaviors based on information obtained online. This reinforces the need for a collaborative approach between doctors and patients, in which health professionals play a key role in guiding patients about reliable sources and clarifying doubts (Coelho, Coelho and Cardoso, 2013).

In addition, 72.7% of the physicians stated that they provide advice and support to patients who bring information from the internet to their appointments, while 27.3% do not offer this type of assistance. This difference in approach highlights the importance of open and clarifying communication, rather than defensive reactions that can damage the relationship of trust between doctor and patient (Coelho, Coelho and Cardoso, 2013).

The fact that 81.8% of physicians indicate that information from the internet influences the request for referrals to specialists suggests that patients often misinterpret the information they find online and believe that they need specialized care, even for conditions that could be managed in primary care. This phenomenon can overwhelm the health system, increasing the demand for unnecessary specialized consultations and diverting resources that could be allocated to more severe cases (Oliveira et al., 2020).

The age group also influences the request for referrals to specialists. Among adults, 73% requested referrals, while only 6% of young people and 3% of the elderly did the same. This data suggests that greater familiarity with digital technologies and greater access to online information may be factors that contribute to a greater request for referrals to specialists by adults. In the case of the elderly, their lower familiarity with digital technologies or confidence in medical judgment may explain the lower rate of requests for referrals (Moretti; Silva; Barsottini, 2016).

A study by Flynn, Smith, and Freese (2021) points to the digital divide among the elderly, which may explain this difference. In a study conducted by Chaudhuri (2013), it was

also identified that older people prefer other sources of information, such as health professionals, pharmacists, family members, and retired community workers, rather than searching for health information online.

The perception that consultations with patients who bring information from the internet require more time was expressed by 81.8% of the physicians, which suggests that health professionals dedicate a significant part of the consultation to address the information obtained online, correct misconceptions and guide patients on what is appropriate or not. This increase in the time dedicated to consultations may result in additional pressure on physicians, who already face an intense workload, especially in the context of the public health system (Moraes; Zoboli, 2023).

A relevant aspect investigated was the frequency with which patients request inappropriate treatments based on information acquired online. According to the doctors interviewed, 52% indicated that these requests occur between one and four times a month, while 30% stated that they occur five to nine times a month. A worrying 18% of physicians reported facing more than ten requests for inappropriate treatment per month (Silva; Moreira, 2021).

As observed by Coelho, Coelho and Cardoso (2013), many physicians expressed discomfort when they saw their guidelines confronted with information found on the internet or even expressed concern about the veracity of this information. This difficulty is evidenced both by the questions asked by the patients and by the reports of the physicians themselves, who recognize the difficulty of the patients in identifying reliable sources.

While the internet has the potential to empower patients, it also carries risks, especially when there is no proper filter to assess the veracity of information. In this scenario, the role of the physician is not only to provide the clinical consultation, but also to guide the patient to discern between reliable sources and those that may compromise their health (Bastos & Ferrari, 2011).

In summary, the research shows that, while the internet plays a growing role in the search for health information, it also generates significant challenges. Access to OHI can empower patients, but at the same time, it can lead to incorrect decisions, damaging treatment and the doctor-patient relationship. The role of the physician, therefore, is fundamental in guiding patients, helping them to distinguish reliable information from that which can compromise the quality of health care (Moretti, Oliveira and Silva, 2012; Ivanova, 2013).

## CONCLUSION

Regarding the interaction between physicians and patients who search for health information on the internet, the present study reveals some central points. It was observed that the practice of seeking information online before consultations has a relevant impact on the dynamics of consultations in the Family Health Units (USF) of Campo Grande - MS. The collected data show that this practice can influence the request for tests and treatments by patients and increase the time of consultations, evidencing the need for a differentiated approach by health professionals.

Despite the perceived advantages, such as improved communication and greater patient autonomy, there are also challenges, such as the difficulty of patients in distinguishing reliable sources of information. This situation can result in requests for inappropriate treatments and damage to the doctor-patient relationship, with loss of trust and, in some cases, self-medication. In this way, the role of doctors goes beyond offering clinical guidance, also covering the education of patients regarding the use of online information.

## REFERENCES

1. Afya. (2023). Sete em cada dez pacientes recebem informações falsas de diagnósticos na internet, aponta pesquisa. Recuperado em 21 de maio de 2025, de <https://portal.afya.com.br/saude/sete-em-cada-dez-pacientes-recebem-informacoes-falsas-de-diagnosticos-na-internet>
2. Aref-Adib, G., O'Hanlon, P., Fullarton, K., Morant, N., Sommerlad, A., Johnson, S., & Osborn, D. (2016). A qualitative study of online mental health information seeking behaviour by those with psychosis. *BMC Psychiatry*, 16(1), 232. <https://doi.org/10.1186/s12888-016-0952-0>
3. Bastos, B. G., & Ferrari, D. V. (2011). Internet e educação ao paciente. *International Archives of Otorhinolaryngology*, 15(4), 515–522. <https://doi.org/10.1590/S1809-48722011000400016>
4. Brasileiro, F. S., & Almeida, A. M. P. (2021). Barreiras à informação em saúde nas mídias sociais. *Revista Digital de Biblioteconomia e Ciência da Informação*, 19, e021013. <https://doi.org/10.20396/rdbci.v19i0.8666147>
5. Chaudhuri, S., Le, T., White, C., & Demiris, G. (2013). Examining health information-seeking behaviors of older adults. *Computers, Informatics, Nursing*, 31(11), 547–553. <https://doi.org/10.1097/01.NCN.0000432131.92020.42>
6. Chen, J., & Wang, Y. (2021). Social media use for health purposes: Systematic review. *Journal of Medical Internet Research*, 23(5), e17917. <https://doi.org/10.2196/17917>
7. Chiu, Y. C. (2011). Probing, impelling, but not offending doctors: The role of the internet as an information source for patients' interactions with doctors. *Qualitative Health Research*, 21(12), 1658–1666. <https://doi.org/10.1177/1049732311417455>
8. Christakis, N. A., & Fowler, J. H. (2009). *O poder das conexões: A importância do networking e como ele molda nossas vidas*. Rio de Janeiro, RJ: Campus.
9. Coelho, E. Q., Coelho, A. Q., & Cardoso, J. E. D. (2013). Informações médicas na internet afetam a relação médico-paciente? *Revista Bioética*, 21(1), 142–149. <https://doi.org/10.1590/S1983-80422013000100017>
10. De Looper, M., Van Staa, A., Smets, E. M. A., & Damman, O. C. (2021). The influence of online health information seeking before a consultation on anxiety, satisfaction, and information recall, mediated by patient participation: Field study. *Journal of Medical Internet Research*, 23(7), e23670. <https://doi.org/10.2196/23670>
11. Flynn, K. E., Smith, M. A., & Freese, J. (2006). When do older adults turn to the internet for health information? Findings from the Wisconsin Longitudinal Study. *Journal of General Internal Medicine*, 21(12), 1295–1301. <https://doi.org/10.1111/j.1525-1497.2006.00622.x>
12. Forgie, E., Lai, H., Cao, B., Stroulia, E., & Greenshaw, A. J. (2021). Social media and the transformation of the physician-patient relationship: Viewpoint. *Journal of Medical Internet Research*, 23(12), e25230. <https://doi.org/10.2196/25230>



13. Freitas, L. L. de, & Pereira, M. S. da. (2022). Promoção da saúde e a atuação das redes sociais: Desafios e possibilidades. Brasília, DF: Ministério da Saúde. Recuperado em 21 de maio de 2025, de <https://www.saude.gov.br/promoção-das-redes-sociais>
14. Gantenbein, L., Künzli, H., & Eberle, S. (2020). Internet and social media use in dermatology patients: Search behavior and impact on patient-physician relationship. *Dermatologic Therapy*, 33(6), e14098. <https://doi.org/10.1111/dth.14098>
15. Hibou. (2023). Saúde do brasileiro – 2023. São Paulo, SP: Hibou. Recuperado em 23 de abril de 2025, de <https://medicinasa.com.br/saude-brasileiro-2023/>
16. Iverson, S. A., Howard, K. B., & Penney, B. K. (2008). Impact of internet use on health-related behaviors and the patient-physician relationship: A survey-based study and review. *The Journal of the American Osteopathic Association*, 108(12), 699–711. <https://doi.org/10.7556/jaoa.2008.108.12.699>
17. Ivanova, E. (2013). Internet addiction and cyberchondria - Their relationship with well-being. *Journal of Education, Culture and Society*, 4(1), 57–70. <https://doi.org/10.15503/jecs20131-57-70>
18. Karatas, C., Caldwell, P. H. Y., & Scott, K. M. (2022). How paediatricians communicate with parents who access online health information. *Journal of Paediatrics and Child Health*, 58(12), 2169–2176. <https://doi.org/10.1111/jpc.15991>
19. Larsen, C. B., & Gilstad, H. (2022). Qualitative research studies addressing patient-practitioner communication about online health information. *International Journal of Environmental Research and Public Health*, 19(21), 14004. <https://doi.org/10.3390/ijerph192114004>
20. Marconi, M. A., & Lakatos, E. M. (2022). Metodologia científica [E-book]. Rio de Janeiro, RJ: Grupo GEN. Recuperado em 29 de fevereiro de 2024, de <https://integrada.minhabiblioteca.com.br/#/books/9786559770670/>
21. Moraes, T. de S., & Zoboli, E. L. C. P. (2023). Excesso de informações online: O desafio da relação entre médicos e pacientes na era digital. *The Conversation*. Recuperado em 21 de maio de 2025, de <https://theconversation.com/excesso-de-informacoes-online-o-desafio-da-relacao-entre-medicos-e-pacientes-na-era-digital-215981>
22. Moretti, F. A., Oliveira, V. E., & Silva, E. M. K. (2012). Acesso a informações de saúde na internet: Uma questão de saúde pública? *Revista da Associação Médica Brasileira*, 58(6), 650–658. <https://doi.org/10.1590/S0104-42302012000600008>
23. Murray, E., Lo, B., Pollack, L., Donelan, K., Catania, J., Lee, K., ... & Turner, R. (2003). The impact of health information on the internet on the physician-patient relationship: Patient perceptions. *Archives of Internal Medicine*, 163(14), 1727–1734. <https://doi.org/10.1001/archinte.163.14.1727>
24. Nangsangna, R., & Vroom, F. D. C. (2019). Factors influencing online health information seeking behaviour among patients in Kwahu West Municipal, Nkawkaw, Ghana. *Online Journal of Public Health Informatics*, 11(2), e13. <https://doi.org/10.5210/ojphi.v11i2.10141>



25. Oliveira, D. L. de, Lima, A. F., Santos, R. B., & Oliveira, G. B. (2020). A influência da internet na relação médico-paciente: Desafios para o cuidado em saúde. *Revista da Associação Médica Brasileira*, 66(7), 889–894. <https://doi.org/10.1590/1806-9282.66.7.889>
26. Rider, T., Malik, M., & Chevassut, T. (2014). Haematology patients and the internet: The use of on-line health information and the impact on the patient-doctor relationship. *Patient Education and Counseling*, 97(2), 223–238. <https://doi.org/10.1016/j.pec.2014.08.006>
27. Saragiotto, B. T., & Fernandes, L. (2023). Excesso de informações online: O desafio da relação entre médicos e pacientes na era digital. *The Conversation*. Recuperado em 21 de maio de 2025, de <https://theconversation.com/excesso-de-informacoes-online-o-desafio-da-relacao-entre-medicos-e-pacientes-na-era-digital-215981>
28. Silva, J. C., & Moreira, M. C. (2021). A influência da internet nas solicitações de tratamentos médicos inapropriados: Um estudo sobre as percepções dos profissionais de saúde. *Revista Brasileira de Medicina*, 23(4), 189–201. Recuperado em 21 de maio de 2025, de <https://www.rbm.com.br/influencia-da-internet-no-tratamento-medico>
29. Souza, L. A. de, & Santos, M. A. dos. (2019). Promoção da saúde no contexto das redes sociais significativas. *Psicologia: Teoria e Pesquisa*, 35(1), 85–92. <https://doi.org/10.1590/0102-3772e3519>
30. Sun, Y., Zhang, Y., & Wang, Z. (2022). Can online health information sources really improve patient satisfaction? *Frontiers in Public Health*, 10, 940898. <https://doi.org/10.3389/fpubh.2022.940898>
31. Zhao, X., & Basnyat, I. (2022). Online information and support seeking during COVID-19 lockdown in Wuhan: Implications for health promotion. *Health Promotion International*, 37(3), daac057. <https://doi.org/10.1093/heapro/daac057>

## APPENDIX I - FREE AND INFORMED CONSENT FORM

Research title: ACCESS TO HEALTH INFORMATION ON THE INTERNET BY THE POPULATION OF CAMPO GRANDE - MS: A MEDICAL PERSPECTIVE.

Researchers: Elieverson Guerchi Gonzales, Jhuanna Carolina Neves Echeveria, Maria Clara Spaini, Natalia Macedo Correa, Renata Barboza Stefanello, Sarah de Souza Jafar, Thaylley Julia Arrais and Victor Enzo Takeshita.

You are being invited to participate in this research, which aims to understand the perception of physicians in relation to patients who seek information about their own health on the internet. You are free to refuse to participate and even refuse to continue participating in any phase of the research, without any prejudice. Whenever you want, you can request more information about the research by calling the researcher responsible for the project: Eliéverson Guerchi Gonzales, +55 67 9272-6014.

There will be no remuneration or allowance (reimbursement) for their participation. The risks involved in research: according to CNS resolution 466/2012, all research involving human beings has risks, such as when filling out the questionnaire the patient may have some embarrassment, breach of confidentiality and fatigue. To avoid the risks, your name will not be disclosed in the survey results for confidentiality purposes. Also aiming at the prevention of these risks, the interviews will be carried out in an environment chosen by the interviewee, seeking to make the participants comfortable in their speech and without interruption from them.

We are careful not to ask any questions that could cause any emotional discomfort or bad memories. In addition, we will not do filming or any type of recording. The researchers are also committed to maintaining total confidentiality of the data collected, as well as ensuring confidentiality, privacy and the protection of their image. We assure you that even after signing the informed consent form, the participant may withdraw at any time. By participating in this research, you will contribute to science and public health in your region. The budget and expenses are the responsibility of the researchers.

If you have any considerations or questions about research ethics, please contact Eliéverson Guerchi Gonzales, +55 67 9272-6014 or the Research Ethics Committee (CEP) of Uniderp University, Rua Ceará, Nº 333, Bairro Miguel Couto – Bloco 3, sala 327 City: Campo Grande/ MS CEP: 79003-010 – Campo Grande (MS), phone: (67) 3348-8025, e-mail cep.uniderp@anhanguera.com.

This term is in accordance with Resolution 466 of the National Health Council, of December 12, 2012, to protect the rights of human beings in research. If you have any questions about your rights as a research participant, or if you feel that you have been placed at unforeseen risks, you may contact the Research Ethics Committee for clarification. Note: Do not sign this term if you still have doubts about it.



After these clarifications, we ask for your free consent to participate in this research. Therefore, please fill in the following items:

Informed Consent Date \_\_/\_\_/\_\_.

In view of the items presented above, I, \_\_\_\_\_, bearer of the RG number \_\_\_\_\_, in a free and informed way, I express my consent to participate in the research. I declare that I have received a copy of this consent form, and I authorize the research to be carried out and the data obtained in this study to be disseminated.

Signature of the Research Participant.

Researcher's Signature

## APPENDIX II - DATA COLLECTION QUESTIONNAIRE ON ACCESS TO HEALTH INFORMATION ON THE INTERNET

<p><b>1. How many times a month do you receive patients in consultations where the MAIN REASON FOR THE CONSULTATION was information taken from the internet?</b></p> <p><input type="radio"/> 1 to 4 times</p> <p><input type="radio"/> 5 to 9 times</p> <p><input type="radio"/> More than 10 times</p>
<p><b>2. How many times a week do patients come to the office with information taken from the internet?</b></p> <p><input type="radio"/> 1 to 2 times</p> <p><input type="radio"/> 3 to 4 times</p> <p><input type="radio"/> 5 or more times</p>
<p><b>3. Would you list any benefits to patient access to medical and health information on the internet?</b></p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes. Which?</p> <p><input type="radio"/> Improved communication between doctors and patients</p> <p><input type="radio"/> Valuing the meeting with the professional</p> <p><input type="radio"/> Better patient adherence to the proposed treatment</p> <p><input type="radio"/> Better understanding of the patient in relation to his or her own health status</p> <p><input type="radio"/> Greater patient autonomy</p> <p><input type="radio"/> None of these</p>
<p><b>4. Did the information brought on the internet by the patient induce the request for complementary tests or medications?</b></p> <p><input type="radio"/> Yes, for exams</p> <p><input type="radio"/> Yes, for medicines</p> <p><input type="radio"/> Yes, both</p> <p><input type="radio"/> No, none</p>
<p><b>5. Did the information obtained on the internet by the patient facilitate the patient's treatment?</b></p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes</p>
<p><b>6. Did the patient's attendance with information from the internet generate advice and social support for adequate and directed understanding of the patient's reality regarding self-care and improvement of their health condition?</b></p> <p><input type="radio"/> No</p>