Chapter 87

Web page and health communication: experience report in scientific initiation project

Vanessa Wolff Machado
Higher School of Health Sciences - ESCS, Brasília/DF.
Institutional Address: UNIT I - SMHN Quadra 03, set A, Block 1 - FEPECS Building - Brasília/DF
Corresponding author and advisor of the Scientific Initiation Program - PIC/ESCS
E-mail: machadovwm@gmail.com

Mateus Tavares Ribeiro
Higher School of Health Sciences - ESCS, Brasília/DF.
Institutional Address: UNIT I - SMHN Quadra 03, set A, Block 1 - FEPECS Building - Brasília/DF
Student of the Scientific Initiation Program - PIC/ESC

Marlon Yuri Gonçalves Silva
Higher School of Health Sciences - ESCS, Brasília/DF.
Institutional Address: UNIT I - SMHN Quadra 03, set A, Block 1 - FEPECS Building - Brasília/DF
Student of the Scientific Initiation Program - PIC/ESC

ABSTRACT
Introduction: The work of the Toxicological Information and Assistance Center depends on effective health communication. Information and communication technologies have the potential to improve information management, access to health services, quality of care, continuity of services and cost containment. Objectives: Experience report of the process of implementing the website as a communication tool in health by students and their advisor in the Scientific Initiation Program. Method: Descriptive, qualitative study, of the experience report type. Discussion: The article exposes the authors' motivations with a contextualized report, with objectivity and theoretical support. From the confrontations and difficulties within the project journey, solutions and new paths were pointed out. Conclusion: Although the initial objective proposed was not feasible within the bureaucratic procedures and stipulated deadlines, it was possible to point out the relevance of the work and its lessons.

Keywords: Internet, Health Communication, Information Dissemination, Internet Use, Health Education.

1 INTRODUCTION

Within the clinical practice and the study of semiology, it is taught in academia that nosology's are born from multicausal factors. These elements can have diverse origins, such as metabolic, infectious, autoimmune, neoplasms and toxicological. In turn, toxicology emerges as a relevant focus of pathological study since antiquity. This is justified by the knowledge that studies, in a multidisciplinary way, the adverse effects of exogenous chemicals on a living organism[1].

Throughout the evolution of civilization, industrial processes and expansion of the agricultural frontier corroborated the diversification of the most studied and manned toxicological agents today. Today, there is a range of classifications for these agents which are widely revisited in the literature. Accidents with venomous animals and poisoning by medicines, domiciliary, agricultural pesticides, industrial solvents and heavy metals can be cited as main examples [One,2].

The post-war period of the 20th century allowed a great advance in pharmacological studies and consequently toxicology as science. In Brazil, the first unit responsible for poisoning in Brazil was founded in the 1970s, in São Paulo, with the nom and the São Paulo Poison Center. In the 1980s, the Toxic-Pharmacological Information System (SINITOX) was created by the Ministry of Health[2]. Today

, in Brazil, there are 36 Centers for Information and Toxicological Assistance (CIATs), which function in university hospitals, state and municipal health departments of 19 federated units[3].

The failure in the curricula of health courses in Brazil on the subject, added to the low level of education of the population, corroborates with health and health problems related to toxicological events[2]. Based on this panorama, the importance of these toxicology centers should be emphasized, due to the work both in the care of health professionals of various levels attention, as well as information to the general population and collection of epidemiological data.

The work of CIATs depends largely on effective health communication. This is an emerging and constantly evolving theme that increasingly encompasses new aspects and concepts to the lon go of time. Health communication is traditionally known as interpersonal communication between health professionals between themselves and between patients. In fact, it also includes the community with the population (for example, through the media), as well as with users of the health service. In addition, it promotes social responsibility and citizen empowerment because communication directs institutions, the third sector and for-profit companies to the values social cohesion and sustainable development [4].

Adequate communication strategies can contribute to reduce environmental, cultural and socioeconomic barriers that hinder knowledge and conscious adoption of health-promoting behaviors [Four, four], four. Within the health communication theme, information and communication technologies (ICTs) have the potential to address many of the challenges that health systems face . Globally , ICT covers all digital and analog technologies that facilitate the capture, processing, storage and exchange of information through electronic communication , and have the potential to improve information management, access to health services, quality of care, continuity of services and containment of costs[5].

Despite few studies available on the scope and conditions for successful integration of ICT into practice, and limited evidence on effective interventions that promote the adoption of ICTs by health professionals, it seems clear that the provision of an e-mail address on *the Internet* seems to favor the health communication process.

In the scenario of the Federal District, we highlight the creation of CIAT on June 16 , 2004, through decree 24,656[6]. The advice and guidance in the face of toxic accidents is carried out on an emergency basis and on a permanent basis (24 hours/day) to health professionals who enable and optimize the care, diagnosis and treatment of patients victimized by chemical exposures in general, including exposures for potentially toxic substances, contamination by agricultural or household pesticides, household or industrial chemicals, toxic plants, venomous animals, medicinal products for human or animal use, illicit drugs or any other potentially toxic agent. It also provides specific information to the lay community regarding prevention, first aid and measures or maneuvers that can minimize the effect of any exposure to a toxic agent, up to the serviceof a health professional[7]. It has a multidisciplinary team of professionals (doctors, nurses, pharmacists) and medical student trainees.

Over the years the service has undergone several changes in management and denominations. During this period, the center also had the creation of a digital portal in August 2011, however, this domain has no connection with the platforms of the local health department and it was an initiative of professionals working in theinstitute[6]. Given the importance of an updated digital health base for CIAT, open to the population and health professionals, the need for the implementation of a new digital platform for service in the CIAT of the Federal District.

In this context , the provision of an internet page *at an* address linked to official local health platforms is justified in the improvement of the service, enhancing advertising and legitimization of this before its users, and facilitating the process of information's in another informative and educational vehicle. This work proposed the experience report of the web page implementation process as a health communication tool by students of the Scientific Initiation Program (PIC), linked to the undergraduate medicine, and the respective advisor, contextualizing how the experience was experienced, what was observed and how it was recorded by the students and sharing their discoveries, facilities and difficulties from the experience.

2 GOALS

This study has, as a general objective, the experience report of the process of implementation of the website as an instrument of communication in health by PIC students, linked to the undergraduate in Medicine, and his advisor.

As specific objectives, contextualize how the experience was experienced; disseminate observations and records made by students and advisor; share discoveries, facilities and difficulties from the group's experience.

3 METHOD

This is a descriptive study, qualitative of the experience report type. It was considered pertinent to describe an experience that integrates theoretical and practical knowledge in the solidification of a scientific learning acquired in the context of initiation Scientific within the undergraduate course in Medicine, which is a complement to student higher education training.

The work occurred during the period of validity of the PIC 2020/2021 of a Public Higher Education Institution of the Federal District, and the project, including its planning, started in June 2020, until September 2021. It was attended by two students from the last year of medical school and a advisor linked to CIAT, whose initial objective of the project was the creation, implementation and internet page maintenance of *the* local CIAT. To this end, the group was prepared to work on the design of the page in aspects of content, design and structure, in addition to indexing through the use of *metatags*, built-in HTML commands, aiming at their location by page search tools and use of address performance control and evaluation tools electronic.

The first step that occurred in the project consisted of the content evaluation of a platform previously available in an e-mail address, available in <https://sites.google.com/site/ciatbrasilia/>. The platform in question, in addition to not presenting an update since December 28 , 2011, has an informal character and no link with official platforms related to other being provided by district health management. Based on this, the whole core of the project was the search for the implementation of a platform in the same way as the previous platform, but updated and managed by professionals responsible for the maintenance of the other websites of the health department.

However, due to the coronavirus pandemic situation, in 2020 the local health department rehandled several employees to optimize work in situations of high demand of health services, the PIC advisor was assigned to perform his work activities in another sector, without binding to the CIAT, and did not return to the initial place of work completion of the PIC 2020/2021 in September 2021.

For this reason, due to the change in work dynamics, both of the advisor and of the health department as a whole, the implementation of the CIAT website on the platform official *internet* address was not possible, despite the investments in virtual dealings with maintainers and those responsible for the official virtual addresses of communication in health.

Faced with not succeeding in the completion of the project initially proposed, the researchers chose to change the profile of the research, deciding to report the experience learned to from the difficulties experienced by the authors and share the new paths that presented themselves to overcome the obstacles.

It should be emphasized that the decision to share the experience report came after the group realized that giving up was a poignant option and that, atthe same time, it would seem like the only option for a short time period, was overcome from the work of collaborative thinking. Dissarte, the discussion was opened about the current importance of access to public health information on the *Internet*, the points necessary for the proper use of it , and difficulties imposed for access and its optimization.

Moreover , the project did not require approval from the Research Ethics Committee (CEP) because it did not have an experiment with human beings.

4 DISCUSSION

Research from the beginning of the century points out that even before the exponential growth in the number of users and the advent *of smartphones*, *the internet* was already the main source of health information to 70% of Americans over the age of 21. It is fair to place air that the *internet* has already established itself as the main tool of communication and research at the global level and the ease of information sharing, being scientific knowledge formal or personal experiences, has transformed in a final way the way the population obtains information about any area [8,9].

In the field of health, the utilities are diverse and modulated to the need of the internet user. The network can be useful both for knowledge of practical functionality (appointment scans, plemental examinations and expert consultation, for example) and for knowledge of cognitive nature, how to

delve into a particular pathology, treatments, scientific dissemination, and research on health promotion practices [8,9].

In Brazil, search carried out by the company Google showed a profile of searches performed by users. The study showed that among those   who sought health issues in the previous 3 months, 60% sought medical treatment, 52% about general information about diseases, 48% causes and symptoms, 40% on medications, 39% potential consequences of treatments, 39% sought information about specialists and 28% on diagnosis of diseases. The same   google study pointed out that 72% of users put online search canisms as   the main source of health information, a percentage that corroborate the study american aforementioned at the beginning of this [discussion 10].

In view of the initial   objectives of this work, it is important to divide digital platforms according to their purpose: information platforms and obtaining theoretical knowledge, private management platforms (laboratories, private clinics, imaging centers, among others) and more   pertinent to our case, information platforms about the operation of public services. Analyzing qualitatively a digital platform, government management or not, is fundamental in Brazil in view of the profile of the population. This is justified because, according to the   2019 National Study P per Household Sample (PNAD), conducted by the Brazilian Institute of Geography and Statistics (IBGE), *the Internet is*   8   2.7% of Brazilian households [11].

Together with the primary role of the Internet as a tool, it is important to elucidate negative points. An important setback to be cited   is the "Flood of Information" to which users are exposed whenever they search for content or service. The   information offered on the network, in addition to being generated in abundance, can be incomplete, conflicting or even false, whose good example is the recent phenomenon of *fake news*. These associated factors undermine the reliability of platforms and hinder the salutary use of the information obtained, especially in   populations with   lower levels of education   . A practical example of this was a search conducted using Google in January 2014, in which about 7.76 million results were counted in the language when searching for the term 'tuberculosis'. Within the search   it was possible to target platforms from diverse backgrounds: newspapers, academic websites, hospital and office sites, self-help and even communities   present in social networks and discussion forums [11,13,14].

Another negative point already raised by the authors is the dichotomy *between the Internet* as a means of empowering the population, due to the easy access of access to content and services, and on the other hand it kind of acts as a 'medicalizer'. This term tries to   consider that any knowledge about health, even if obtained from true sources, if disseminated without due criticism and consideration, can be practices harmful to the lay public, such as self-medication and growth in clientelist relationships between patients and health professionals. By highlighting these negative aspects and the potential for using the Internet as a public health tool, it is read to point out the existence of initiatives that have as qualitatively evaluate these digital platforms. Initiatives of this nature emerged more than 20 years   ago and exist in several countries, each using certain criteria for value [11,13,14].

A pioneer among the methods of evaluating digital platforms, the Health On the Net Foundation (HON) was the first initiative of this character in the world, was created in 1995 and to this day is considered by many authors as gold standard in get information on health websites. The entity fights for fundamental ethical principles to be followed and lists a list of norms to be followed. Sites in several languages around the world, if they comply with these standards, may apply for and receive the HONCode seal. Addresses are reviewed annually and must comply with the aspects of: qualifying responsible, respecting users' privacy, detailing platform financing, reference data appropriately and clearly differentiate from the exposed advertising content. Currently the seal is used by more than 8,300 sites in 102 countries [14].

In Brazil, the most relevant initiative in this issue was a resolution created on February 20, 2001 by the Regional Council of Medicine of the State of São Paulo (CREMESP). This resolution made it mandatory for platforms managed by professionals and institutions registered with the Council to follow an ethics guide for medical and health websites on the Internet [15]. Although it is a code of conduct and not a certification such as the HONcode seal, the guide defines seven principles to be followed to ensure the safety and reliability of the sites: transparency, honesty, quality, free and informed consent, privacy, medical ethics and resp on ability/provenance. Although it is restricted to the state of São Paulo and there is no initiative in this way at the national level, such a guide can be considered a north construction and maintenance of health platforms for the rest of the country.

Within the concept of ITCs as necessary tools for the qualification of health management, and be accepted by health professionals and recognized as auxiliary for the practice of continuing education in health [16], barriers are frequent in the implantation of ITCs in a universal way. Bringing the debate to the field of *internet addresses* managed by government agencies, there is no production in the literature that discusses, in a specific way, the difficulties encountered in the progress of the project as originally planned. In attempting to update the CIAT platform, in addition to various bureaucratic barriers, inadequacies were established inadequacies to the principles of digital quality such as those scored by HON and by CREMESP.

In general, although the initial objective proposed within the PIC was not feasible in the bureaucratic procedures and stipulated deadlines, it is possible to point out that the relevance of the work is made present in the literature raised.

5 CONCLUSION

From the report of the processes and difficulties perceived in the various phases of the PIC, the authors discuss the experience of conducting the process of implementation of the website as health communication instrument.

The article exposes the authors' motivations with a contextualized report, with objectivity and theoretical contribution. From the confrontations and difficulties within the project journey, solutions and new paths were pointed out.

In this path, it remains clear the gain of critical and theoretical knowledge throughout the research process and discussion about the difficulties encountered, faced in the light of the tools and theoretical bases studied and are featured in this article.

Although the proposed objective was not feasible within the bureaucratic procedures and deadlines stipulated, it was possible to point out the relevance of the work and its sharing.

REFERENCES

1. Filho ADA, Campolina D, Dias MB. Toxicologia Na Prática Clínica. 2. Ed. Belo Horizonte, Mg: Folium, 2001.

2. Azevedo JLS. A importância dos centros de informação e assistência toxicológica e sua contribuição na minimização dos agravos à saúde e ao meio ambiente no Brasil. 2006. 247 F., Il. Dissertação (Mestrado Em Desenvolvimento Sustentável) - Universidade De Brasília, Brasília, 2006.

3. Brasil. agência nacional de vigilância sanitária. rede nacional de centros de informação e assistência toxicológica (RENACIAT). disponível em <https://www.gov.br/anvisa/pt-br/assuntos/fiscalizacao-e-monitoramento/renaciat> Acesso em 17 Nov. 2020.

4. Gianfredi V, Grisci C, Nucci D, Parisi V, Moretti M. Communication in health. Recenti Prog Med. jul-aug 2018;109(7):374-383. Doi: 10.1701/2955.29706. Acesso em 23 Set. 2021.

5. Gagnon MP, Légaré F, Labrecque M, Frémont P, Pluye P, Gagnon J, Car J, Pagliari C, Desmartis M, Turcot L, Gravel K. Interventions for promoting information and communication technologies adoption in healthcare professionals. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: cd006093. Doi: 10.1002/14651858.cd006093.pub2. Acesso em 23 Set. 2021.

6. O que é CIT?. Centro de informação e assistência toxicológica do Distrito Federal - CIAT/DF, 2011. Disponível em: <https://sites.google.com/site/ciatbrasilia/home>. Acesso em 23 Set. 2021.

7. Cerveira, E. Perspectivas e desafios para a gestão da informação na saúde em plataformas digitais. Revista Fontes Documentais, [s. l.], v. 3, p. 488–493, 2020. Disponível em <https://aplicacoes.ifs.edu.br/periodicos/fontesdocumentais/article/view/672> Acesso em 22 Set. 2021.

8. Moretti FA, Oliveira VEES, Koga EM. Acesso a informações de saúde na internet: uma questão de saúde pública?. Revista da associação médica brasileira [online]. 2012, v. 58, n. 6, pp. 650-658. disponível em: <https://doi.org/10.1590/s0104-42302012000600008>. Acesso em 22 Set 2021.

9. Google. O uso da internet no Brasil para pesquisas sobre saúde, doenças e medicamentos. Media Screen; 2008.

10. Pesquisa mostra que 82,7% dos domicílios brasileiros têm acesso à internet. Ministério das comunicações, Governo Federal, 14 de abr. de 2021. disponível em <https://www.gov.br/mcom/pt-br/noticias/2021/abril/pesquisa-mostra-que-82-7-dos-domicilios-brasileiros-tem-acesso-a-internet>. Acesso em 20 Set. 2021.

11. Lévy, P. Tecnologias da inteligência: o futuro do pensamento na era da informática. Rio de janeiro: ed 34, 1993, 208p (coleção trans).

12. Mendonça APB, Pereira Neto AF. Critérios de avaliação da qualidade da informação em sites de saúde: uma proposta. reciis - Revista eletrônica de comunicação, informação e inovação em saúde, rio de janeiro, v. 9, n. 1, p. 1-15, jan./mar. 2015.

13. Garbin HBR. Empowerment ou medicalização? Reflexões sobre o uso da internet para obtenção de informações em saúde. Tese (doutorado em ciências) - Saúde pública, ensp, Fundação Oswaldo

Cruz, Rio de Janeiro, 2012. Disponível em <http://www.periodicos.capes. gov.br>. Acesso em 21 Jul. 2021.

14. Conselho Regional de Medicina do Estado de São Paulo. Guia de ética para sites de medicina e saúde na internet. Disponível em <http://www.cremesp.org. br/?siteacao=publicacoes&acao=detalhes_capitulos&cod_capitulo=26>. Acesso em 20 Set 2021.

15. Garbin HBR, Guilam MCR, Pereira Neto AF. Internet na promoção da saúde: um instrumento para o desenvolvimento de habilidades pessoais e sociais. Physis: revista de saúde coletiva [online]. 2012, v. 22, n. 1, pp. 347-363. Disponível em: <https://doi.org/10.1590/s0103-73312012000100019>. epub 12 abr 2012. Acesso em 22 Set 2021.

16. Uchida T, Fujimaki M, Umeda J, Higasi M, Caldarelli P. (2020). Percepção de profissionais de saúde sobre utilização de tecnologias de informação e comunicação. *revista sustinere, 8*(1), 4-22. Doi:https://doi.org/10.12957/sustinere.2020.51280