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RESEARCH

The use of WhatsApp in the physician-patient relationship

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Abstract

This article describes how the WhatsApp application is used in the physician-patient relationship at the pediatrics and obstetrics outpatient clinic of the Santa Casa de Misericórdia Foundation in the State of Pará, Brazil, and discusses its ethical implications. Data was collected in qualitative field research using a semi-structured questionnaire applied to eight physicians. As a result, it was observed that among the situations of preferential use of WhatsApp mentioned by the respondents is the clarification of doubts (62.5%). Among the disadvantages mentioned by the interviewees is the trivialization of the use of this type of service by patients (37.5%), and 62.5% consider the use of the application ethical. We conclude that there is a lack of research on the subject addressed and of regulation of the use of the application in the health area.
Keywords: Physician-patient relations. Ethics medical. Social media.

Resumo

O uso do WhatsApp na relação médico-paciente

Este artigo descreve como o aplicativo WhatsApp é utilizado na relação entre pacientes e médicos do ambulatório de pediatria e obstetrícia da Fundação Santa Casa de Misericórdia do Pará, Brasil, e discute suas implicações éticas. Dados foram levantados em pesquisa de campo qualitativa por meio de questionário semiestruturado aplicado a oito médicos. Como resultado, observou-se que entre as situações de uso preferencial do WhatsApp citadas pelos respondentes está o esclarecimento de dúvidas (62,5%). Entre as desvantagens mencionadas pelos participantes está a banalização do uso desse tipo de serviço por parte dos pacientes (37,5%), e 62,5% acham que a utilização do aplicativo seja ética. Conclui-se que faltam pesquisas sobre o assunto e regulamentação do uso do aplicativo na área da saúde.
Palavras-chave: Relações médico-paciente. Ética médica. Mídias sociais.

Resumen

El uso del WhatsApp en la relación médico-paciente

Este artículo describe cómo se utiliza la aplicación WhatsApp en la relación entre médicos y pacientes del ambulatorio de pediatría y obstetricia de la Fundación Santa Casa de Misericordia del Pará, Brasil, y discute sus implicancias éticas. Los datos fueron recogidos en una investigación de campo cualitativa, por medio de un cuestionario semiestructurado aplicado a ocho médicos. Como resultado, se observó que entre las situaciones de uso preferencial del WhatsApp citadas por los médicos entrevistados aparece el esclarecimiento de dudas (62,5%). Entre las desventajas mencionadas por los participantes está la banalización del uso de este servicio por parte de los pacientes (37,5%), y el 62,5% no creen que sea ético el uso de la aplicación. Se concluye que faltan investigaciones sobre el tema y una regulación del uso de la aplicación en el área de la salud.
Palabras clave: Relaciones médico-paciente. Ética médica. Medios de comunicación sociales.

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Declaram não haver conflito de interesse.

The doctor-patient relationship was established in a spontaneous and exacting way by physicians over the years until the Second World War, when, in face of the atrocities committed, especially by Nazi doctors, this relationship was regulated by the Nuremberg Code [1]. After that, the Helsinki Declaration [2], adopted in 1964 by the 18th General Assembly of the World Medical Association in Finland, established ethical principles for medical research involving human beings, which also had an impact on the doctor-patient relationship.

Physicians had to adapt to the peculiarities of their patients, in order to do their work in a respectful, beneficent and committed way with positive results [3]. The study of this relationship, being transversal, serves as a basis for the progression of communication skills both in community and hospital medicine, as well as being essential to improve medical education [4].

With the advent of new technology, tools such as the internet have been able to favour the doctor-patient relationship. The internet foster discussions between health professionals and patients about the best therapeutic behaviour due to the large amount of medical information it provides [5]. However, misleading and irresponsible information about health can generate lethal situations to users, and this should be considered a public health issue [6].

Another tool would be the online service, which dispenses with patient's visits to clinics or hospitals and optimises the exchange of clinical information. In addition, it improves cost-effectiveness for the patient and enables real-time medical care in extremely distant places. It is important to stress, however, that this possibility does not eliminate the need for face-to-face consultation, which should not be replaced by online contact [5].

Personal contact facilitates physical examinations are essential for diagnosis and facilitates the creation of a doctor-patient relationship. It is also worth mentioning that e-mail, cardiac telemonitoring , phone consultation and online medical audits are examples of the technology that is being used by doctors to communicate with patients. However, since the legislation and the *Código de Ética Médica* (Code of Medical Ethics -CEM) [7] do not adequately address the issue, there has been an increase in consultation processes with the Conselho Federal de Medicina - CFM (Federal Council of Medicine) and regional councils to clarify doubts about legal responsibilities [5,8-12].

Amidst so many pros and cons regarding the use of certain technologies in medicine, one of the communication devices that have attracted the attention of people all over the world, including doctors and patients, is WhatsApp. The use of this application has grown in several countries, including Brazil. It is regularly used by half a billion people worldwide, generating a daily flow of millions of messages, videos and photos [13]. These numbers are also related to the gratuitousness of access and availability in various operating systems, such as Android and Windows. All it requires is an internet connection. As far as medical communication is concerned, WhatsApp is being used in an occasional way by patients who need immediate contact or to send test results urgently to the doctor responsible for the patient's treatment.

According to the CEM [7], responsibility for regulating consultation via telemedicine is from the CFM, which has been discussing such communication practices. To date, the CFM states that a physician who sends reports through internet may perform diagnostic and / or drug assistance only in emergency cases or when requested by the attending physician, without disregard for confidentiality. The Tel Aviv Declaration [16] on responsibilities and ethical guidelines in the practice of telemedicine, adopted in 1999 by the World Medical Assembly in Israel, serves as a basis for ruling the issue in Brazil due to the needs felt by the councils.

The analysis and use of these new instruments and the lack of specific legislation in the country show the impasse of the relationship between confidentiality and bilateral privacy between doctor and patient. The Helsinki Declaration [2] states that every precaution must be taken to protect the privacy and confidentiality of patients' personal information, but it is not known whether such conduct is actually being put into practice.

These technologies demonstrate the need to conduct studies on this new physician-patient relationship and to adapt it to the Brazilian ethical and legislative requirements. Thus, this study sought to analyse the use of the WhatsApp application in the doctor-patient relationship and to identify its positive and / or negative aspects. In addition, it assessed the ethical implications of this practice using the CEM as reference and ascertained whether there is privacy and confidentiality of the information transmitted bilaterally by the application, particularly in relation to patient data.

Method

Eight professionals participated in the study, which was based on the Helsinki Declaration [2], the Nuremberg Code [1] and the Resolution of the *Conselho*

Nacional de Saúde (National Health Council - CNS) 466/2012 [17]. The pre-project was approved by the Comitê de Ética em Pesquisa (Research Ethics Committee - CEP) of the *Universidade do Estado do Pará* (State University of Pará). It was also approved by the direction of the *Fundação Santa Casa de Misericórdia* (Santa Casa de Misericórdia Foundation) of Pará, where the study was carried out. After approval of the project by the CEP, the researchers invited physicians in the obstetrics and pediatrics outpatient clinic on the days destined to collect data at the hospital (between January and March 2016), in a random and consecutive manner.

The physicians who agreed to participate in the study signed the *termo de consentimento livre e esclarecido (*informed consent form - TCLE) and received a self-administered questionnaire. The questionnaire (enclosed in the article) had closed questions about aspects that involve the use of WhatsApp, and open questions about the advantages and disadvantages of the application as well as the ethical implications. It was questioned, in order to evaluate the privacy and confidentiality of patients' data, whether physicians have mobile (cell) phones exclusively for this type of communication and if third parties would have access to the device used for this purpose.

In addition, the questionnaire asked the doctor's specialty, whether or not he or she uses the WhatsApp as a means of communicating with the patient and, if so, for what purpose and in what situations he or she uses WhatsApp. In addition, the questionnaire evaluated the frequency of use of the tool. On the other hand, the questionnaire also sought to address the opinion of the professionals regarding the ethics of the application in relation to the patient. After 12 minutes the researchers returned to the clinic to collect the completed questionnaires. Information was obtained from four paediatricians and four obstetricians. All data collection and analysis was performed by the researchers.

The study included all physicians of the aforementioned specialties who agreed to participate and signed the informed consent form, without distinction of gender, age, ethnicity, educational level, income level or marital status. All those who were not present at the hospital during data collection were excluded. This research consisted of qualitative, transversal and observational analysis (since there was no manipulation of the studied population [18]). According to the structure of the variables, a descriptive statistical evaluation was carried out, informing the percentages of the elements.

The results obtained were analysed through individual responses, creation and export of dynamic charts, use of comparison rules and categorisation of open answers using Excel and Word. Thus, it was possible to analyse the use of WhatsApp in the doctor-patient relationship and its ethical implications, as well as to identify its positive and / or negative aspects and the confidentiality and privacy of the information transmitted.

Results

The analysis of the questionnaires revealed that four paediatricians, out of eight doctors who participated in the study, were using the application between January and March 2016 at the *Fundação Santa Casa de Misericórdia do Pará (*Santa Casa de Misericórdia do Pará Foundation) and just one of the four obstetricians was not using WhatsApp. Table 1 presents data about those doctors' opinions:

Table 1. Opinion of obstetricians and paediatricians on the use of WhatsApp at *Fundação Santa Casa de Misericórdia do Pará*, January-March /2016

Characteristics	n	%
Preferred usage		
Clarifcation of doubts	5	62.5
Emergency	2	25
Other situations	3	37.5
None	1	12.5
Benefits		
Maintain good doctor-patient relationship	2	25
Monitor long distance treatment	1	12.5
Avoid unnecessary trips to the doctor who is already reaching out to the patient	1	12.5
Guiding and clarification of doubts of the patient	3	37.5
Send test results	2	25
Inform the doctor about new symptoms that appear after the consultation	1	12.5
Emergency	3	37.5
Quick communication	1	12.5
Disadvantages		
Lack of patient's boundaries	3	37.5
Patient no longer wants to go the consultation	2	25
Loss of doctor's privacy	1	12.5
Lack of legal support	1	12.5
Banalisation of the medical service	2	25
None	1	12.5

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Table 2 summarizses the data related to the frequency of use of the application by physicians:

Table 2. Characterisation of WhatsApp management by obstetricians and paediatricians of the *Santa Casa de Misericórdia Foundation of Pará* for communication with patients, January-March / 2016

Characteristics	n	%
Use of the app		
Yes	5	62.5
No	3	37.5
Total	8	100
Usage Frequency during the week		
Variable	3	37.5
Several times	2	25
Once	1	12.5
None	2	25
Total	8	100
Feels comfortable using the app		
Yes	2	25
No	5	62.5
Only if it is ordinary information or simple doubt	1	12.5
Total	8	100

Table 3 presents data on the ethical behavior of physicians regarding the privacy and confidentiality of patient data:

Table 3. Ethical behaviour of paediatricians and obstetricians using WhatsApp with patients from the *Fundação Santa Casa de Misericórdia do Pará*, January-March / 2016

Characteristics	n	%
Owns work mobile (cell) phone		
Yes	1	12,5
No	7	87,5
Total	8	100
Other people have acess to their mobile (cell) phone		
Yes	2	25
No	6	75
Total	8	100
Thinks it is ethical to use WhatsApp with patients		
Yes	3	37,5
No	5	62,5
Total	8	100

Discussion

Brazil is one of the countries that most uses digital ways of communication, both to obtain medical information and to establish contact with peers and patients. In this study, more than half of the participating physicians (62.5%) reported that they used WhatsApp to communicate with their patients. This finding is corroborated by a research conducted by the British Consultancy Cello Health Insight in November 2015, in which 87% of participating Brazilian physicians reported using WhatsApp to communicate with patients at least 30 days prior to the date when they were interviewed by the healthcare market research agency [19].

In contrast, the survey found that only a small percentage of British and American physicians (2% and 4%, respectively) responded positively to the same question. It is thus apparent that while the use of the application to establish contact with patients is very timid in the United States and the United Kingdom, it has been very frequent and widespread in countries such as Brazil, Italy and China [19]. The differences could be related to the populations of these countries and their health systems, including the role of codes of ethics and social expectation in relation to the work of professionals. Both factors are likely to influence different proportions.

Clarification of doubts (62.5%), emergency situations (25%) and other unspecified situations (37.5%) are among the situations of preferred usage of WhatsApp cited by the interviewees (Table 1). It is important to consider that respondents could mark more than one option. In addition to the "preferred usage" category, clarification of doubts and use in some type of medical emergency were also considered in the "advantages" category (both cited by 37.5% of physicians).

These results agree with a study which demonstrated that the most frequently questions asked by patients to physicians through the application addressed doubts about diagnosis and treatment. [20] Regarding WhatsApp in medical emergencies, the same work revealed that this type of care happened in 17% of the conversations analysed, and an urgent visit was required to resolve the cases [20].

The improvement in the physician-patient relationship was also cited by 25% of the interviewees as an advantage of the use of the application for communication. This result partially corroborates the study in which the application was cited by 80% of physicians as a means of

improving communication, but they were referring to professionals at different levels in the work hierarchy [21]. This shows that, even in different service settings (in relation to the patient or between colleagues), WhatsApp has facilitated the sharing of information relevant to clinical evaluation.

In addition, the possibility of sending test results by the application was also considered advantageous by doctors. This has been demonstrated in the literature, which shows that the sharing of the results of certain tests (laboratory, X-ray, ultrasonography, electrocardiogram and photographs of patient's lesions) has proved effective and contributed to a more objective and efficient care, especially in cases of medical emergency. [23] This is corroborated by the Tel Aviv Declaration [16], which states that a patient who is geographically isolated or without access to a local doctor may, in case of emergencies, be tele-assisted.

The possibility of accompanying the patient from a distance was also cited as an advantage of the application by 12.5% of physicians. These results agree with another study, which showed that the use of these supports reduces geographic barriers, allowing the patient to perceive the need for clinical evaluation and increasing early diagnosis rates [11]. This would favor mainly patients living in rural areas or in areas poorly covered by health services [12]. Another advantage mentioned was the speed of communication provided by the technology. This advantage was cited by only one of the respondents (12.5%) of this research, but was cited by most of the interviewees from other studies [22-24].

Among the disadvantages related to WhatsApp in the doctor-patient relationship mentioned by the interviewees is the trivialisation of the medical service by the patients (25%). Another study [22] demonstrated that, in fact, more accurate clinical data are necessary for good care and many times the data can not be sent using the application (due to lack of resource or knowledge of the person passing the information). This justifies the dissatisfaction of doctors with a service centred solely on the exchange of messages online.

The fact that patients no longer wish to go to face-to-face medical appointments after the possibility of having appointments using WhatsApp was mentioned by 25% of respondents. This is a justified concern because physical examination is still necessary [20,22] even if the application supports clinical care. Pictures sent by patients may not be of sufficient quality, making it difficult to properly diagnose and increasing the possibility of error [20]. Due to the restriction in contact, since the doctor does not see, touch or check the patient's vital signs, to diagnose and define the treatment only through information and images online could even be characterised as imprudence.

In addition, data shared using the application will not be registered in medical records, making it difficult to provide legal protection to the professional and the patient in the event of legal matters [24]. The absence of legal support was cited by 12.5% of respondents as one disadvantage of the exchange of messages in the interaction with patients.

Although physicians reported in this study frequent communication with patients through WhatsApp - 25% of respondents use the application countless times per week and 37.5% with variable frequency depending on need (Table 2) - 62.5% of respondents admitted that they do not feel comfortable doing so. One of the great discomforts for these professionals is the fact that there is no specific regulation on the technology for this purpose, leaving it to the doctor's discretion.

This doubt is reflected in the current debates in the regional medical councils, where doctors consult on what attitude to take with respect to the use of WhatsApp in medical practice. The May 2015 position of the *Conselho Regional de Medicina do Estado do Pará* (Regional Council of Medicine of the State of Pará) stands out. They concluded, after a query made by a paediatric doctor, that consultations via social media do not constitute complete medical acts [25]. The decision was supported by the CEM. This is because according to their conclusion, based on the Resolution CFM 1958/2010, the complete medical act includes anamnesis, physical examination, elaboration of hypotheses or diagnostic conclusions, request for complementary tests (when necessary) and therapeutic prescription [25].

According to a note approved in plenary session of the *Conselho Regional de Medicina do* Estado *de São Paulo* (Regional Council of Medicine of the State of São Paulo) on September 20, 2016, the medical act is considered the gold standard of medical care [26]. In addition, the note stated that the act of responding to patients using WhatsApp or similar applications should be based on previous knowledge about the patient's current clinical situation, in order to use these means of communication with the intention of guiding the patient, always keeping in mind the respect for professional secrecy [26].

Regarding this issue, the use of the doctor's unique smartphone handset would help maintain the privacy and confidentiality of data bilaterally

transmitted using the application, as long as third parties do not have access to it. However, in this research it was verified that 87.5% of physicians do not have exclusive mobile (cell) phones and 25% of respondents reported third-party access (Table 3). This violates the Resolution CFM 1.643 / 2002 [15], which establishes that the professional must have adequate infrastructure to ensure the confidentiality, privacy and confidentiality of patient data in order to practice telemedicine. In addition, these points are essential moral principles for preserving a good doctor-patient relationship [27].

This lack of care of physicians with transmitted information, especially information about patients, also became a source of discussion in a study of the American University of Beirut Medical Center, in which the majority of participants (78.6%) believed that virtual communication could result in medical-legal problems, and 71% considered it a privacy violation [28]. This issue also helps to stimulate discussions about the use of WhatsApp.

Final considerations

There was a shortage of papers related to the topic during this research, what demonstrates the need for discussion and development of new studies, which is the main suggestion of the researchers. Online communication has gained space and it is almost inevitable that it will increasingly influence the practice of medicine.

Therefore, this work aims to stimulate the interest of the scientific community, especially the medical profession, seeking not only to enrich the scientific production on the new dynamics of the doctor-patient relationship, but also to emphasise that there is still no regulation for the use of those applications. This makes it important to recognise that the concern about the consequences of this technological advancement for medical practice is shared by the Federal Medical Council and regional councils.

It also highlights the importance of disseminating available information on responsibilities and ethical guidelines in the practice of telemedicine in the workplace, such as the Tel Aviv Declaration [16], understanding that accountability and confidentiality criteria should extend to all health workers so they can count on guidance on how to proceed.

Thus, the lack of parameters of conduct and effective regulation should be seen as potentially problematic. This was demonstrated by this study, which found out that professionals were hesitant to respond to the proposed questionnaire due to lack of clear regulation or knowledge about some advice already released by medical councils which advised doctors and patients on the use of the application in case of doubt. In addition, the lack of care and norms to protect patient information transmitted by the WhatsApp was a factor that contributed to the anxiety of physicians both in ethical-legal issues and in assessing the quality of the relationship with the patient.

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Research

Attachment

Research: The use of WhatsApp in the physician-patient relationship

I. Questionário

1. Do you use the WhatsApp application with your patients?

( ) Yes ( ) No

2. What is your medical specialty?

( ) Pediatrics ( ) Obstetrics

3. How often do you use WhatsApp with your patients during the week?

( ) Once ( ) Three times

( ) Twice ( ) Other. Quantity: _____

4. Do you have a mobile (cell) phone specific to serve your patients via WhatsApp?

( ) Yes ( ) No

5. Do third parties have access to the mobile (cell) phone that you use to communicate with your patients?

( ) Yes ( ) No

6. Do you feel comfortable using this medium to communicate with your patients?

( ) Yes ( ) No

( ) It depends. Why? _____

7. Are there any situations where you prefer to use WhatsApp? Which one?

( ) Emergencies ( ) Patients with serious diseases

( ) Postoperative ( ) Patients with chronic diseases

( ) Clarification of doubts ( ) Other(s).

Specify: _____

8. What are the advantages and disadvantages of WhatsApp in the physician-patient communication, in your opinion?

_____

_____

_____

_____

_____

9. Do you consider the use of WhatsApp between doctor and patient ethically appropriate?

_____

_____

_____

_____

_____

Research