

## Are we ready to embrace Telemedicine in Nephrology?

### Authors

Paulo Novis Rocha <sup>1</sup>

<sup>1</sup> Universidade Federal da Bahia.

Phone, fax and e-mail have been used for many years to shorten distances between patients and doctors. Space stations and oil rigs are extreme - but real - examples of places without access to traditional medicine. According to the Brazilian Federal Council of Medicine (FCM), Telemedicine is “the practice of medicine through the use of interactive methodologies of audiovisual and data communication, for the purpose of patient care, teaching and research”. Telemedicine so defined, is already part of our everyday lives as doctors, teachers and researchers.

The popularization of mobile phones has allowed virtually unlimited access to the doctor. Smartphones with internet access allow immediate transmission of videos, still photographs and exam reports, bringing the traditional “phone consultation” to a new level. While writing this Editorial, I answered several questions and requests from patients by e-mail or short message service. I do this quite often, but only for patients that I know and follow regularly in the clinic.

Despite the obvious advantages to the patient, Telemedicine has brought some drawbacks for the doctor, such as loss of privacy and precious time with the family. Additionally, doctors are not paid for informal Telemedicine. It is worth mentioning that, in Brazil, telework is regulated by the law 12,551 of December 15, 2011, which determines that “there is no distinction between the works performed in the employer’s establishment, on the domicile of the employee or from a distance, as long as the assumptions of the employment relationship still hold”. Although this law does not refer to the patient-doctor relationship, one can extrapolate that it

essentially states that telework is work and, therefore, must also be compensated.

It’s always worth remembering that, when providing Telemedicine, the doctor is not without legal responsibilities. The Brazilian Code of Medical Ethics states that “medical attention from a distance, along the lines of Telemedicine or another method, shall be under regulations of the Brazilian Federal Council of Medicine”. Generally speaking, the Brazilian FCM adopts the set of responsibilities and ethical standards in the use of Telemedicine established in the 51<sup>st</sup> General Assembly of the World Medical Association in Tel Aviv, Israel, in October 1999 (Chart 1). The Tel Aviv declaration states that “when using telemedicine directly with the patient, the doctor assumes the responsibility of the case in question. This includes the diagnosis, opinion, treatment and direct medical interventions “. However, in the opinion of the Regional Council of Medicine of the State of Bahia (resolution 05, year 2003), “Telemedicine is only permissible between doctors, after obtaining informed consent from the patient or his legal guardian”. The Regional Council also stated that “direct connection with the patient should be performed only in extreme situations, when there is no possibility of access to a doctor” and that “the doctor should assess the risks and uncertainties of dealing with information passed on by individuals who were not trained for such craft”.

In this edition of the Brazilian Journal of Nephrology, researchers from Juiz de Fora-MG announce the development of Telemedicine software to provide virtual consultations to patients with stable, pre-dialysis chronic kidney disease.<sup>1</sup> The authors’ proposal is that all patients undergo an

Submitted on: 06/24/2015.

Approved on: 07/30/2015.

### Correspondence to:

Paulo Novis Rocha.  
Faculdade de Medicina da  
Bahia da Universidade Federal  
da Bahia. Departamento de  
Medicina e Apoio Diagnóstico.  
Praça XV de Novembro, S/N,  
Largo do Terreiro de Jesus,  
Salvador, BA, Brasil.  
CEP: 40025-010.  
Tel: (71) 3321-0383.  
E-mail: paulonrocha@ufba.br

DOI: 10.5935/0101-2800.20150046

**CHART 1** ESSENTIAL READING ON ETHICAL AND LEGAL ASPECTS RELATED TO TELEMEDICINE

Documents	Contents
Declaration of Tel Aviv, October 1999	Defines responsibilities and ethical standards in the use of telemedicine, adopted by the 51 <sup>st</sup> General Assembly of the World Medical Association in Tel Aviv, Israel, in October 1999.
FCM resolution Nº 1,643/2002	Defines and regulates Telemedicine.
FCM resolution Nº 1,821/2007	Approves technical standards related to electronic medical record.
FCM resolution Nº 1,931/2009	The 6 <sup>th</sup> Code of Medical Ethics.
Law Nº 12,551/2011	Rules on telework.
FCM resolution Nº 1,974/2011	Establishes the guiding criteria of advertisement in medicine.

initial face-to-face consultation in the office, followed by three virtual consultations through the software, totaling four consultations per year. Data for the virtual consultation can be entered by the patient, a family member or a primary care physician. The software also has a chat function that enables real-time exchange of messages between doctors and patients. The system guarantees confidentiality through the use of passwords and does not allow exclusion or editing of messages. The authors mention the following potential benefits of virtual consultations: greater accessibility to specialized nephrology care in underserved areas, convenience, possible cost reduction and greater interaction between the patient and the primary care physician.

The proposal of the Juiz de Fora group is interesting and modern. However, a few warnings are in order. First, it would be interesting to hear the Brazilian FCM as well as local councils regarding the ethical aspects of the proposal. In a document published on the website of the Brazilian FCM aiming to clarify any issued regarding the interpretation of the resolution 1,974 of 2011, the following hypothetical question is asked: “I work in a region that has very few doctors. Could I offer long-distance services, providing phone assistance to patients who reside in neighboring towns? “. The answer is categorical: “No. The resolution prohibits the doctor from offering phone advice to patients and families in place of the face-to-face medical consultation. The doctor may, however, provide telephone assistance to patients that he already knows from prior face-to-face consultation, to clarify questions regarding a prescription medicine, for example”. In this regard, would the initial face-to-face consultation proposed by the Juiz de Fora group be enough to comply with this rule? The first requirement would have to be that the doctor to provide the virtual service would have to be the same that provided the initial face-to-face consultation.

Ethical issues aside, there are some questions worth asking: 1) what are the risks of making clinical

assessments and plans based on information contained on an electronic form filled out by patients or relatives?; 2) when would doctors make the virtual calls: during the usual work hours in the office, at the expense of face-to-face consultations; or “after hours” at home?; 3) what would be the impact of the program on the quality of life of doctors?; 4) how would the doctors be compensated?; 5) would the results be similar to those obtained with the face-to-face consultation? A randomized clinical trial comparing Telemedicine with face-to-face consultation in the outpatient monitoring of patients with diabetic foot showed no differences between the groups regarding wound healing or the need for amputation, but mortality was significantly higher in the group allocated to Telemedicine (Hazard Ratio 8.68;  $p = 0.0001$ );<sup>2</sup> 6) would the doctor-patient relationship be the same? Many of us believe that this relationship is strengthened in the office, the temple of clinical medicine, by the touch of the doctor. If a strong doctor-patient bond is not established, could this affect the patient's compliance? This could become especially important in major, life changing decisions, such as to place an access to initiate dialysis.

Despite the concerns displayed above, Telemedicine has great potential as a tool that might increase access to specialized care in underserved areas, especially in a country of continental dimensions and limited resources such as Brazil. Therefore, the proposal of the Juiz de Fora group has merit and should be evaluated. But, until studies prove the efficacy and safety of this strategy, nephrologists should continue to provide compassionate and personalized face-to-face service to their patients.

## REFERENCES

1. Fernandes NMS, Bastos MG, Oliveira NAC, Costa AV, Bernardino HS. Telemedicina: Desenvolvimento de um sistema para atendimento à distância de pacientes com doença renal crônica pré-dialítica. *J Bras Nefrol* 2015;37:349-58.
2. Rasmussen BS, Froekjaer J, Bjerregaard MR, Lauritsen J, Hangaard J, Henriksen CW, et al. A Randomized Controlled Trial Comparing Telemedical and Standard Outpatient Monitoring of Diabetic Foot Ulcers. *Diabetes Care*. 2015 Jun 26. pii: dc150332. [Epub ahead of print] DOI: <http://dx.doi.org/10.2337/dc15-0332>