DOI: https://doi.org/10.36489/saudecoletiva.2020v10i53p2394-2403

Quantitative analysis of remote care during the COVID-19 pandemic related to the historical landmarks of the disease in Brazil

Análisis cuantitativo de la atención remota durante la pandemia de COVID-19 relacionada con los hitos históricos de la enfermedad en Brasil

Análise quantitativa do atendimento remoto durante a pandemia do COVID-19 relacionado aos marcos históricos da doença no Brasil

ABSTRACT
The study´s aim was to quantify the number of remote visits realized during the COVID-19 pandemic in Brazil and to relate the historical landmarks of the disease in the country. This is a descriptive, cross-sectional, quantitative study that used information from a health integrator´s database. As the disease increases exponentially in the country, the visits number realized by health`s team increased 76%. It is concluded that telemedicine is founded as an important way to secure access and care continuity.
DESCRIPTORS: Telemedicine; Coronavirus; Pandemics.

RESUMEN
The study´s aim was to quantify the number of remote visits realized during the COVID-19 pandemic in Brazil and to relate the historical landmarks of the disease in the country. This is a descriptive, cross-sectional, quantitative study that used information from a health integrator´s database. As the disease increases exponentially in the country, the visits number realized by health`s team increased 76%. It is concluded that telemedicine is founded as an important way to secure access and care continuity.
DESCRIPTORES: Telemedicine; Coronavirus; Pandemics.

RESUMO
O objetivo deste estudo foi quantificar o número de atendimentos remotos realizados durante a pandemia de COVID-19 no Brasil e relacionar os marcos históricos da doença no país. Este é um estudo descritivo, tipo transversal, de natureza quantitativa que usou informações de uma base de dados de uma integradora de saúde. À medida que a doença aumenta em número exponencial no país, a quantidade de atendimentos realizados pela equipe de saúde aumentou em 76%. Conclui-se que a telemedicina fundamenta-se como um importante canal para assegurar acesso e continuidade do cuidado.
DESCRITORES: Telemedicina; Coronavírus; Pandemias.

RECEIVED ON: 03/27/2020 **APPROVED ON:** 03/28/2020

Tamyres Mendes e Silva Castro
Nurse in Patient Experience at Vitta. Postgraduate in Attention to Women's Health and postgraduate student in Family Health Strategy. Federal University of Rio de Janeiro. Orcid: https://orcid.org/0000-0001-6923-0021.

Brunielle Andressa Guimarães Silva
Nurse in Patient Experience at Vitta. Postgraduate in Adult Cardiology and Donation Capture and Transplantation of Multiple Organs and Tissues. University of São Paulo .Orcid: https://orcid.org/0000-0002-2307-1616.

Karina Venturi
Leader and Health Manager at Vitta. Nurse. MBA in Leadership, Innovation and Management and Postgraduate in Pediatric and Neonatal Intensive Care. Israeli Faculty of Health Sciences Albert Einstein. Orcid: https://orcid.org/0000-0002-8596-9181.

INTRODUCTION

The new Coronavirus agent, discovered in 2019, is characterized as the latest global health threat, promoting an ongoing outbreak of the respiratory disease called SARS-CoV2, which causes flu-like respiratory symptoms or mild colds, and can progress to severely in those considered to be at risk, such as the elderly and those with chronic diseases[1].

On March 23, 2020, there were more than 378,000 cases of COVID-19 diagnosed worldwide and just over 16,000 confirmed deaths. Influenza pandemics are unpredictable events, but recurring and capable of generating serious consequences for human health. According to the World Health Organization (WHO), it is recommended that one of the national plans for coordination and planning during the pandemic is to consider providing assistance and technical assistance to countries with few resources, in addition to providing health support to patients and their contacts in alternative homes and facilities, if necessary[2,3].

There is evidence that telemedicine can significantly contribute to cases like this, in which a careful look is needed, in real time, as well as the use of digital equipment and systems for the comprehensive monitoring of patients[4].

The remarkable advance of information and communication technologies and their application in the health area democratized access to knowledge, contributing to improvements in health care, which can be applicable both in the public system and in Brazilian supplementary health, being considered an additional tool in the relationship professional-patient[5].

In Brazil, due to the arrival of the new Coronavirus, the possibility of adopting some modalities of telemedicine was recognized in the country, in order to be a very useful tool for situations like the current one, facilitating the avoidance of contact with COVID- 19, displacements and agglomerations[6].

The aim of this study is to describe the time series of COVID-19 in Brazil, identifying its historical milestones and relating in a quantitative way to health care performed remotely at a health integrator in the country. The guiding question adopted for this study was: What was the impact and demand that the COVID-19 pandemic generated in remote care as the disease spreads in Brazil?

The new Coronavirus agent, discovered in 2019, is characterized as the latest global health threat, promoting an ongoing outbreak of the respiratory disease called SARS-CoV2, which causes flu-like respiratory symptoms or mild colds, and can progress to severely in those considered to be at risk, such as the elderly and those with chronic diseases[1].

METHODOLOGY

This is a descriptive, cross-sectional study, of a quantitative nature, carried out with information from the database of a health integrator that offers constant remote assistance through a Health Team, 24 hours a day, 7 days a week, for messaging and phone call application channels for patients across the country.

Descriptive studies represent a necessary management tool in health systems, as they report the accuracy of the facts that occurred in a given region or population[7].

The work scenario is a Health Integrator that has, as one of its products, a full-time health team to meet the needs of members who are in different regions and in all states of the country. The health team is composed of the Leader (a Nurse), the Personal Nurses and the Personal Analysts.

The calls are made via the messaging application or the telephone call in a receptive manner, when the contact is made by the member, or active, when the team makes the contact. Analysts provide responsive service, schedule appointments and therapies and resolve administrative demands. Nurses monitor users with high consumption of the Supplementary Network, chronic and acute comorbidities and attend to clinical complaints arising from the receptive, when demanded by the analysts who transfer the message for the evaluation and consultation of Nursing.

The months of February and March 2020 were used as a time frame, divided weekly and relating them to the historical moment that Brazil was going through in relation to COVID-19. During this period, the care provided by Nurses that in-

volved respiratory clinical complaints and doubts about COVID-19 were welcomed and directed in accordance with the Coronavirus Clinical Management Protocol in Primary Health Care[8].

The study data will be demonstrated through graphics, in which the time markers will be described on the horizontal axis and the number of receptive messages received by the health team on the vertical axis.

For this study, we used as inclusion criteria the receptive care received via message application from the period from 24/02/2020 to 20/03/2020. The exclusion criteria were receptive calls via telephone contact, as well as contacts made during weekends and outside the aforementioned time frame.

The information applied in this study, included in the database of the health integrator in question, received authorization by the management of the institution of origin to be used.

Results and Discussion

We will use as a cut-off data the number of calls made in the period from 02/24/2020 to 02/28/2020. At the time, the Ministry of Health had just declared the first confirmed case of COVID-19 in Brazil, which was an elderly person who was traveling in Italy during the month of February. At the time, the patient was clinically well and home isolation was recommended and this fact made Brazil the first country in Latin America with a confirmed case of the new virus[9].

Figure 1. Members are found in all states of the country. São Paulo, SP, Brazil, 2020

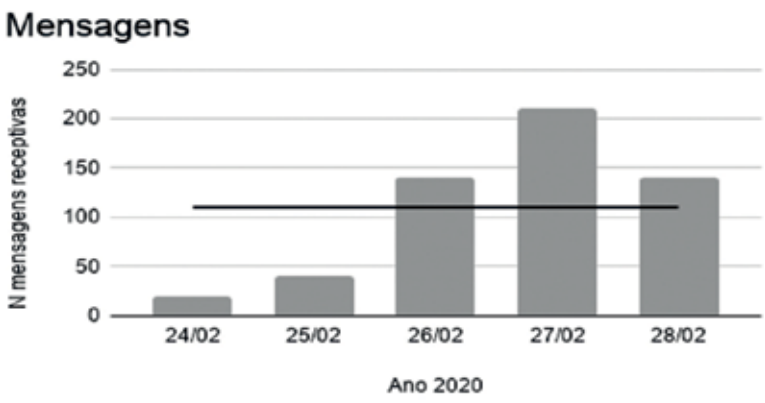
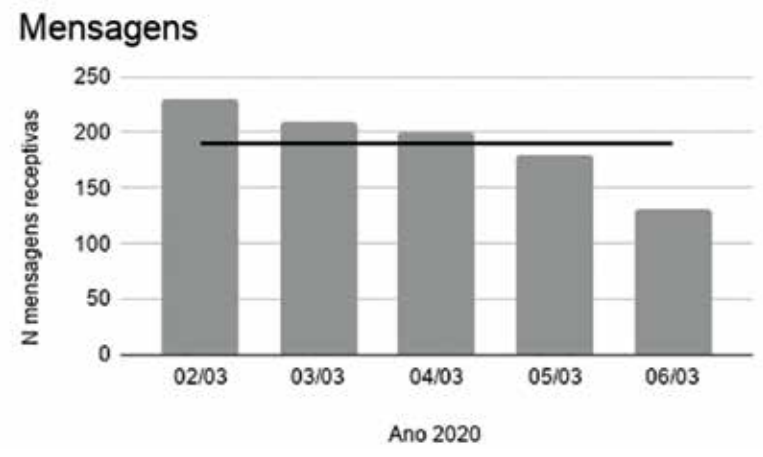


Figure 2. Members are found in all states of the country. São Paulo, SP, Brazil, 2020



This same week, an average of 110 remote calls per day was maintained, and it is also worth mentioning the Carnival festivities that the country celebrated.

At the same time, there were more than 80 thousand confirmed cases and 2.7 thousand COVID -19 deaths in the world, and the standard of care by the health team remained within the annual average[10].

It is worth mentioning that, in the same period, the Ministry of Health launched an application with the objective of raising the population's awareness and providing useful information about the disease caused by Coronavirus[11].

In the following week, from 03/02/2020 to 06/03/3030, there is an exponential increase in the number of confirmed cases in Brazil, with an increase of 14 times the number of infected in relation to the previous week. Of these, there is the first case of local transmission in the State of São Paulo, whose infection is transmitted from one to the other without a history of international travel, but not yet in a community and sustained manner in the country.

At this moment, the recommendation begins that the population avoid visits to hospitals and health centers without the need, that companies dismiss employees with respiratory symptoms in order to avoid overload in the health network and hygiene and precaution measures are strongly advised.

This week, a total of 950 remote calls were recorded in five days, which means a comparative increase of 72% compared to the previous week.

This fact agrees with and supports the recommendation to avoid the presence in hospital units if there are no signs of alarm and worsening of respiratory symptoms.

The ease in seeking health care remotely, whether for eventual clinical demand or health doubts, in addition to the present feelings of uncertainty and anxiety that permeate society as a whole, confirms the significant increase in remote care during this phase and generates impact health services, reducing the flow of care in emergency units.

It is important to highlight that, in the face of the current scenario, the practice of isolation and quarantine has a strong impact on the reduction of viral circulation and that remote assistance contributes to health assistance to reach those who need it quickly and safely.

Figure 3. Members are found in all states of the country. São Paulo, SP, Brazil, 2020

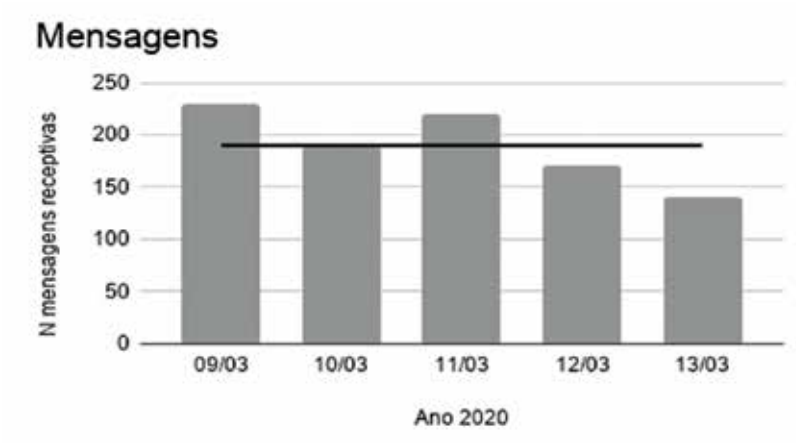
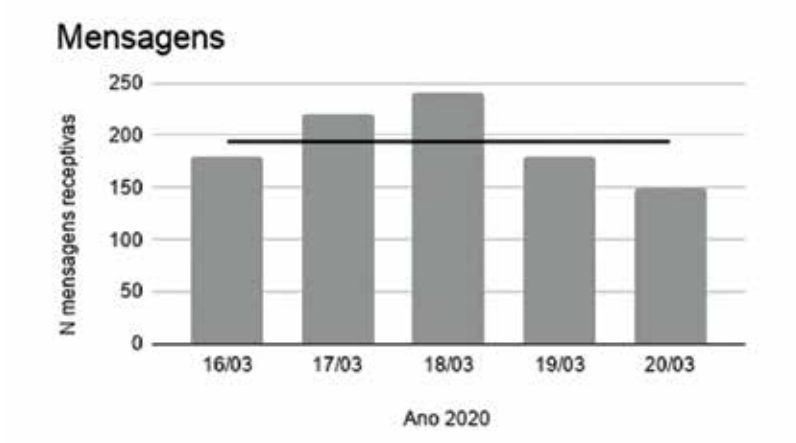


Figure 4. Members are found in all states of the country. São Paulo, SP, Brazil, 2020



On 03/11/2020, WHO declared a COVID-19 pandemic, recommending that countries focus efforts on detecting and tracking the disease, isolating cases and mobilizing human resources to respond to COVID-19, thus preventing those with few cases become centers for the spread of the virus and, consequently, for sustained community transmission[12].

At this time, the patterns of remote care continue to be an important health access channel for the population and continue to show discrete rates of increase in demand, as shown in the graph below:

On 03/17/2020, Brazil declares the first case of death by COVID-19 in the country. According to current expectations, the estimate is that for every 160 cases of the new Coronavirus, about 30 are from patients in serious condition[13].

In the range from 03/16/2020 to 03/20/2020, the health team continues to maintain levels of care above the average and showing an increase in the volume of care of 76% more compared to the end of February.

At this time, tele-orientation and telemedicine measures, in addition to direct contact with members through various social media, made remote care responsible as an important, accessible and safe means of offering health..

Conclusion

The Coronavirus pandemic generated involvement of the entire national and international scene, with active participation by society and awareness of the importance of precautionary, preventive and social isolation measures.

However, there is still a long way to go before we can control viral spread

The Coronavirus pandemic generated involvement of the entire national and international scene, with active participation by society and awareness of the importance of precautionary, preventive and social isolation measures.

through studies, research, estimates and collective participation and, until then, many new confirmed cases may still arise.

Telemedicine is currently an important channel to ensure access and continuity of care. Such a practice helps to scale up assistance, educate about prevention, relieve health facilities, stop the spread of the epidemic and, above all, save lives. In addition, the applicability of telemetry and post-care follow-up are essential and impactful during the pandemic period, favoring both the early diagnosis of a Severe Acute Respiratory Syndrome (SARS) and the decrease in the flow of care and risk classification in hospital units.

It is worth noting that such a theme still lacks discussion and scientific evidence in view of the magnitude of the current national and international scenario. ■

REFERENCES

1. Ministério da Saúde [Internet]. Coronavírus [acesso em 26 mar 2020]. Disponível em: https://coronavirus.saude.gov.br/sobre-a-doenca#transmissao.
2. Johns Hopkins University. Coronavirus COVID-19 Global Cases by Johns Hopkins CSSE [Internet] [acesso em 26 mar. 2020]. Disponível em: https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6.
3. World Healt Organization [Internet] Global Influenze Programme. Pandemic Influenza Preparedness and Response: a WHO guidance document [acesso em 26 mar 2020]. Disponível em: https://apps.who.int/iris/bitstream/handle/10665/44123/9789241547680_eng.pdf.
4. Brasil Telemedicina [Internet]. Telemedicina é um importante apoio para epidemias como o Coronavírus. [acesso em 26 mar 2020]. Disponível em: https://brasiltelemedicina.com.br/artigo/telemedicina-coronavirus/.
5. Lopes MACQ, Oliveira GMM. Saúde digital, direito de todos, dever do Estado? Arq. Bras. Cardiol. 2019 set; 113(3).
6. Peduzzi PL. Agência Brasil. Saúde [Internet]. CFM autoriza uso de modalidades de telemedicina [acesso em 26 mar 2020]. Disponível em: https://agenciabrasil.ebc.com.br/saude/noticia/2020-03/cfm-autoriza-uso-de-modalidades-de-telemedicina.
7. Aragão J. Introdução aos estudos quantitativos utilizados em pesquisas científicas. Revista práxis. 2011 ago; III(6).
8. Ministério da Saúde, Secretaria de Atenção Primária à Saúde (SAPS) [Internet]. Protocolo de Manejo Clínico do Coronavírus (COVD-19) na Atenção Primária à Saúde. [acesso em 27 mar 2020]. Disponível em: https://www.saude.gov.br/images/pdf/2020/marco/20/20200318-ProtocoloManejo-ver002.pdf.
9. Rodrigues A. Agência Brasil. Saúde [Internet]. Ministério da Saúde confirma primeiro caso de Coronavírus no Brasil [acesso em 26 mar 2020]. Disponível em: https://agenciabrasil.ebc.com.br/saude/noticia/2020-02/ministerio-da-saude-confirma-primeiro-caso-de-coronavirus-no-brasil.
10. Ministério da Saúde, Secretaria de Vigilância em Saúde. Centro de Operações de Emergências em Saúde Pública / COVID-19 [Internet]. Boletim Epidemiológio 04. [acesso em 26 mar 2020]. Disponível em: https://portalarquivos2.saude.gov.br/images/pdf/2020/marco/04/2020-03-02-Boletim-Epidemiol--gico-04-corrigido.pdf.
11. Ministério da Saúde, Agência Nacional de Saúde Suplementar. Notícias ANS [Internet]. Ministério da Saúde disponibiliza ferramentas de comunicação sobre o Coronavírus [acesso em 26 mar 2020]. Disponível em: http://www.ans.gov.br/aans/noticias-ans/consumidor/5383-ministerio-da-saude-disponibiliza-aplicativos-sobre-o-coronavirus.
12. BBC. News. Brasil [Internet]. Coronavírus: OMS declara pandemia [acesso em 26 mar 2020]. Disponível em https://www.bbc.com/portuguese/geral-51842518.
13. Folha de São Paulo [Internet]. Brasil tem primeira morte pelo Coronavírus [acesso em 26 mar 2020]. Disponível em: https://www1.folha.uol.com.br/equilibrioesaude/2020/03/brasil-tem-primeira-morte-pelo-novo-coronavirus.shtm.