

Telemonitoring: analysis of nursing students' perception of the COVID-19 pandemic*Telemonitorización: análisis de la percepción de los estudiantes de enfermería sobre la pandemia COVID-19**Telemonitoramento: análise da percepção dos acadêmicos de enfermagem frente à pandemia da COVID-19***Cristiano Bertolossi Marta¹**

ORCID: 0000-0002-0635-7970

Wenderson Bruno Herculano da Silva¹

ORCID: 0000-0001-5288-4264

Eunice Maria Pereira Côrtes¹

ORCID: 0000-0002-0353-4257

Thaísa Orona Machado¹

ORCID: 0000-0001-6335-4816

Márcio Tadeu Ribeiro Francisco¹

ORCID: 0000-0003-1362-7809

Priscilla Oliveira da Silva¹

ORCID: 0000-0002-6960-9899

Rayanni Monteiro dos Santos¹

ORCID: 0000-0002-6193-4697

Michelle Amorim Ferreira¹

ORCID: 0000-0001-5585-4925

Lilian Prates Belem Behring¹

ORCID: 0000-0003-0044-4392

Milena Preissler das Neves¹

ORCID: 0000-0002-3890-924X

¹Universidade Veiga de Almeida.
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Corresponding author:

Cristiano Bertolossi Marta

E-mail: cristianobertol2014@gmail.com

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Abstract

Experience report of scholarship scholars during the pandemic period caused by COVID-19 in the State of Rio de Janeiro. The City of Rio, through the Municipal Secretary of State Administration and in accordance with Law No. 11,788 / 2008, publishes every year end of the public notice that regulates the selection process for granting non-mandatory internship grants to university students' different areas of health. In 2020, scholarship scholars faced an atypical situation, caused by COVID-19, in which there was a need for a new formulation for the allocation of academics, which were approved according to the notice to start activities in 2020. The objective was to report the experience lived by scholarship scholars, through telemonitoring during the period of social distance caused by COVID-19 in 2020. In Rio de Janeiro, the call center made by academics from the Shared Services Secretariat of the Municipal Secretariat of the Civil House as effective support in several scenarios, such as contact by phone with the patient in treatment of various pathologies and health problems.

Descriptors: Non-Medical Internship; Case Reports; Telemonitoring; Universities.**Resumen**

Informe de experiencia de becarios durante el período pandémico causado por COVID-19 en el Estado de Río de Janeiro. La Ciudad de Río, a través de la Secretaría Municipal de Administración del Estado y de acuerdo con la Ley N.º 11.788 / 2008, publica cada fin de año el aviso público que regula el proceso de selección para el otorgamiento de becas de pasantía no obligatorias a estudiantes universitarios de diferentes áreas de la salud. En 2020, los becarios enfrentaron una situación atípica, provocada por el COVID-19, en la que se necesitaba una nueva formulación para la asignación de académicos, los cuales fueron aprobados de acuerdo con la convocatoria, para iniciar actividades en 2020. El objetivo era informar la experiencia de los becarios, mediante telemonitorización durante el período de desapego social causado por COVID-19 en 2020. En Río de Janeiro, el call center realizado por académicos de la Secretaría de Servicios Compartidos de la Secretaría Municipal de la Casa Civil como apoyo efectivo en varios escenarios, como el contacto telefónico con el paciente en el tratamiento de diversas patologías y problemas de salud.

Descriptoros: Pasantía no Médica; Reportes del Caso; Telemonitorización; Universidades.**Resumo**

Relato de experiência dos acadêmicos bolsistas durante o período de pandemia causada pela COVID-19 no Estado do Rio de Janeiro. A Prefeitura do Rio, através da Secretaria Municipal de Administração do Estado e em acordo com a Lei n.º 11.788/2008, publica todo final de ano o edital que regulamenta o processo seletivo para concessão de bolsas de estágio não obrigatório a estudantes universitários de diferentes áreas da saúde. No ano de 2020, os acadêmicos bolsistas enfrentaram uma situação atípica, ocasionada pela COVID-19, em que houve a necessidade de uma nova formulação para alocação dos acadêmicos, que foram aprovados conforme edital, para ter início as atividades em 2020. Objetivou-se relatar a experiência vivenciada pelos acadêmicos bolsistas, através do telemonitoramento durante o período de distanciamento social ocasionado pela COVID-19 no ano de 2020. No Rio de Janeiro, o teleatendimento realizado pelos acadêmicos da Subsecretaria de Serviços Compartilhados da Secretaria Municipal da Casa Civil foi realizado como suporte efetivo em diversos cenários, tais como o contato via telefone com o paciente em tratamento de diversas patologias e agravos à saúde.

Descriptoros: Internato Não Médico; Relatos de Casos; Telemonitoramento; Universidades.

Introduction

The City Hall of the State of Rio de Janeiro through its Municipal Administration Secretariat and in accordance with Law No. 11,788 / 2008, publishes every year, the notice that regulates the selection process for granting non-mandatory Internship grants university students from different areas of health, among them (Medicine, Nursing, Nutrition, Social Work, Physiotherapy, Dentistry, among others), to work in the units of the Secretariat. This type of non-mandatory internship offered by the city of Rio de Janeiro has a duration of approximately 9 months, where academics may choose to work 10 or 12 hours per week, however this workload cannot exceed 6 hours per day, and should not interfere in the university curriculum^{1,2}.

Scholarship Scholars (AB), as they are called, receive an aid grant that corresponds between 18% and 25% of the salary received by the professional of the eighth category of higher education in the health area and according to the workload established in the public notice. current selection process. Academics can choose the internship or performance field that best suits their professional profile, which can be in the areas of - Health Program at Escola Carioca - PSE Carioca (formerly Dentescola) and other internships (hospital), such as in Mental Health and Collective Health. The placement of these interns in the health units requires the presence of a qualified professional who is interested in playing the role of preceptor and who accompanies the scholarship student during his entire period in the chosen field. Each area has an internship preceptor, offered by the city to guide, and assist academics during the period¹.

The benefit of acting as AB is the opportunity to exercise greater participation in your training and learning process in promotion, prevention, healing, rehabilitation and management actions, providing individualized care, in groups, family members and in contact with patients on a hospitalization, outpatient clinics, primary care or other assistance modalities, always under the guidance of the preceptor, constituting a didactic / pedagogical process that allows the student to have contact with a real activity, for the acquisition of experiences, offering the student tools that will compose his future professional, giving them security and a critical posture in the face of the daily confrontations of the profession. As it is a non-mandatory activity, this practice is well regarded in health units, in addition to providing professional experience and manual dexterity to the academic^{1,3}.

In 2020, the AB faced an atypical situation on the world stage, caused by COVID-19, in which there was a need for a restructuring for the allocation of students who had provided evidence regarding the PUBLIC CVL / SUBSC No. 221, of 06 November 2019, to start AB activities in April 2020.

At first, 452 academics were allocated, between Medicine and Nursing, in the various clinics of the Family Strategy, spread over the city of Rio de Janeiro. However, on March 11, 2020, the World Health Organization (WHO) declared the disease caused by the new coronavirus (SARS-

CoV-2) as a pandemic. With the precaution of care, the Municipal Health Secretariat of the State of Rio de Janeiro (SMS-RJ) suspended the face-to-face allocation of the academics and created the possibility that the pre-established workload would be fulfilled, through the telemonitoring modality, where ABs could contribute with the family health strategy teams in the active search for respiratory symptoms and providing support to the teams in continuity, through remote service, with telemonitoring, thus avoiding the contagion and spread of the virus in communities and preserving the health of academics^{4,5}.

Telemonitoring can be described as remote monitoring of patients, whether for the evaluation of ongoing treatment or for epidemiological verification, although this practice was not widely used by the Unified Health System (SUS). Other countries and private health insurance companies in Brazil have identified benefits with telemonitoring, such as: effectiveness in preventive health, consequent reduction in the use of urgent / emergency services, increased life expectancy, in addition to also considering it as important tool for coping with the increased costs caused by the treatment of Chronic Noncommunicable Diseases (CNCD). Thus, this strategy was used by SUS aiming at favoring social distance and, at the same time, combined with the continuity of monitoring patients undergoing treatment of various pathologies, since this modality reduces the circulation of people on the street and consequently reduces the contamination and spread of the disease⁶.

It is known that this type of monitoring provides the reach of health care in places of difficult access or with a deficient structure⁶, and scholarship students had the opportunity to assist health teams in the development of their activities and continue the care of the areas included by the Family Health Strategies (FHS).

This study aims to report the experience of scholarship scholars from the State of Rio de Janeiro through telemonitoring during the period of social distance, caused by COVID-19 in 2020.

Methodology

This is a descriptive study, of the experience report type, carried out from the experience of scholarship students from the Municipal Health Secretariat of the State of Rio de Janeiro, allocated to the Family Health Strategies in the State of Rio in the year 2020.

The experience report is a tool of descriptive research that presents a reflection on an action or a set of actions that address a situation experienced in the professional sphere of interest to the scientific community. The internship that resulted in the writing of this report took place in 2020 during the pandemic period caused by the SARS-CoV-2⁶.

The following data collection techniques were used: internship diary, weekly activities report developed by students, incremented worksheets for monitoring families and patients attended according to each pathology or team need, and weekly meetings for training in addition to the guidelines and discussion of the cases attended by the AB,



where the most severe cases were screened or those that needed immediate intervention by the health team.

At the beginning of the year, meetings were scheduled with professors from universities affiliated to the State Secretariat so that classes could be taught, and service protocols developed for each segment, which would be monitored through telemonitoring. The meetings were held through Web conferences or group calls, in which some Community Health Agents (CHA) participated, who promote the link between the health teams, AB and the community. Some professionals working in specialized services by the state, such as professors from higher education institutions and the tutors of each team, were responsible for the academics and their activities during the week.

At first, flu-syndrome research classes, childcare classes, pediatrics, breastfeeding, chronic non-communicable diseases, and infectious diseases were given. For the students to have a theoretical basis before starting contacts with the patients, these students were divided into groups that contained 8 to 10 members and that had the presence of 1 CHA from each strategy team, 1 teacher responsible for conducting the case discussions of each student and the internship preceptor, who was a doctor or nurse, responsible for screening the most serious cases, for a face-to-face consultation at the health unit.

A script was created so that students in each area could follow the care provided to their respective patients and groups pre-established by the team, the CHAs, together with the preceptor or teacher, were responsible for organizing the spreadsheet of the week with the phone number of each patient who needed to be contacted, and these patients were divided among the academics who were part of the group. Spreadsheets were created so that students could feed with the information obtained through telemonitoring and continue with the monitoring of cases of greatest need observed. According to the case presented by each patient, there was a need to make a telephone call from 24h to 48h after the first contact, due to comorbidities and / or severity of the presented condition, in other cases it was necessary to return in 7 days or until the resolution of the problem presented by the patient or his discharge. It was also created the possibility for some web conferences to be held when these patients went to the clinic for consultation. Upon prior authorization of the patient, the internship preceptor, Doctor or Nurse, made a call to the student who had contacted the patient initially and when identified the need for a consultation at the health unit for a better evaluation of the responsible professional, this student could follow up the consultation in real time with the internship preceptor who was providing the assistance.

The possibility of holding some Web conferences was also created when there was a need for the patient to go to the clinic for consultation. Upon prior authorization from the patient, the internship preceptor made a call to the AB who had contacted the patient initially and when the need for a consultation at the health unit was identified for a better assessment of the responsible professional, this student could follow the consultation in real time with the

internship tutor who was providing the service. Following is the CAAE number: 35422820.8.0000.5279.

Experience Report and Discussion

With the rapid progression and spread of the new Coronavirus, the control and stabilization of the spread of this pathology has become a challenge worldwide and a real struggle for governments.

One of the decisions taken by the government of the State of Rio de Janeiro to control the spread of the disease, were the measures of social isolation, which began on March 13⁷, the day after WHO declared COVID-19 a pandemic. The state of Rio was the pioneer in the country for determining measures of social isolation as prevention. And it was in this world scenario that telemedicine was of great importance for the continuity of care in health services, mainly in public health, preventive, and clinical practices. Telemedicine can act in different ways:

- Call center can be made through phone calls or videoconference, directed to patients who report any symptoms related to the disease or ask for some medical advice regarding pathology or care and prevention guidelines.
- Telemonitoring and screening are already used to evaluate the data obtained from the patients based on some examination or signs presented by the patient, making a description for the assistance team and screening symptomatic patients based on specific questions that are asked. There are other activities of telemedicine, but they were not part of the methodology used in this study⁷.

One of the benefits of telemedicine is that it can be more convenient for the population and health services because it has a low financial cost, it is quick to access and locate patients, as all that is needed is an active telephone operator for contacts via voice call and internet data to make a video call. In the current situation in which the world finds itself, this type of service can be used to achieve the following objectives:

- Reduced time to obtain a medical diagnosis and start treatment, quarantine the patient or stabilize.
- Assistance for a closer monitoring of the patient, thus allowing, even in social isolation, a monitoring of their clinical condition, without the need to travel to a medical service, reducing the flow of people on the streets, driving and health units⁷.
- Prevention of the risk of contagion among health professionals, since in this way direct physical contact is avoided, reducing the threat of exposure to respiratory and nasopharyngeal secretions.
- Information service for the population.
- It generates cost savings in the service since there is no expense with materials such as: gloves, cleaning products, individual protection masks, cloaks, disposable props, among other PPE



necessary to serve the population while maintaining care for the health of the professional⁸.

the attributes of primary care and continuous care for patients^{4,6}.

In the State of Rio de Janeiro, the call center provided by ABs from the Municipal Health Secretariat was used as an effective support for use in various scenarios such as contact with patients undergoing treatment for Diabetes Mellitus, Systemic Arterial Hypertension, children aged 0 to 5 years, Respiratory Symptomatic, People undergoing Tuberculosis treatment or any other patient who needs further observation according to the criteria selected by the internship preceptor. This type of service provision has positive results, and they are evident in the monitoring of people with chronic diseases, promoting self-care, glycemic control, the importance of performing physical activities, even at home, expanding the bond with the care team and reducing anxiety and depression among patients⁸.

The link between health teams and patients with chronic non-communicable diseases is especially important for the continuity of care. Among the positive impacts of maintaining this link is the reduction in the need for hospitalization due to metabolic complications, in the decompensation of some disease and in the mortality that is associated with these diseases, especially when it is known that one of the risk factors for the diseases linked to new coronavirus are people with chronic non-communicable diseases^{5-7,9}.

Scholarship scholars linked to the Municipality of Rio de Janeiro had the opportunity to provide services in this modality at a distance, thus helping to decrease the flow within the units and helping the teams in the bond, care, prevention and health promotion of these patients who were in social isolation, they were able to learn from the teachers assigned to the unit, answer questions, make web conferences with other more experienced professionals and probably participate in their first case discussions with a multidisciplinary team.

Despite the benefits already pointed out with the telemonitoring service, there are few actions to expand its use in Brazil, especially by SUS, the actions that occurred in the service network were in the projects Rede Universitária de Telemedicina (Rute) and Telessaúde, both focusing on telemedicine to support and improve the quality of primary care⁹.

For the service to be effective, it was structured and based on principles of privacy and ethics, the information related to the patient's health was commented only with him after confirmation of some data such as full name, date of birth and mother's name, using appropriate language, respect and professional responsibility for each category and the uniqueness of each subject. Telemonitoring is used to support health care without replacing face-to-face consultations when necessary, considering welcoming, solidarity, and commitment to life. This implementation offers longitudinally, which is one of

Telehealth is implemented in all states in the country and is an important instrument of innovation for the Family Health Program, despite the importance given to them in some states, they do not show to be national actions, even though this plan is already part of the program. Strategic Action Plan for Coping with NCDs from the Ministry of Health (MS), and there are still no formal studies by the Ministry of Health to analyze its cost-benefit, even though this type of service is being carried out in several other countries. Here in Brazil, we have some health service companies that perform telemonitoring on their associates and partners.

The table below represents the most important private health service providers in the country, which have developed initiatives for the prevention and management of health in their businesses, with the perspective of improving the quality of life and self-care of patients in general and patients, although with different objectives¹.

Chart 1. Health service delivery institutions and their initiatives during the pandemic. Rio de Janeiro, RJ, Brazil, 2020

Reference hospitals				
Company	FU	Service	Application	Focus
Albert Einstein	SP	Tele baby care, tele termination of smoking, Einstein on the go and well-being Einstein	Babies, smokers, physical activities oriented, positive psychology	Self-care because of the sale of check-up and preventive exams
Albert Einstein	SP	Teleconsultation	Companies, patients, and others health service providers	Creation of new integrated service packages and market expansion
Sírio Libanês	SP	Health monitoring and check-up	Preventive medicine and chronic patients	Self-care because of the sale of check-up and preventive exams
Hospital do Coração	SP	Patient check-up program - teleconsulting and telediagnosis for SUS	Preventive medicine and chronic patients	Self-care because of the sale of check-ups and preventive exams for customers - new business with telemedicine services for SUS and other hospitals
Hospital Alemão Oswaldo Cruz	SP	Assistance model	Preventive medicine	Self-care because of the sale of check-up and preventive exams
Private health insurance companies and operators				
Company	FU	Service	Application	Focus



Amil	National	High-risk patient management and family health strategy	Monitoring of chronic patients, a single gateway for FHS patients and encouraging self-care	Improvement of quality of life and cost reduction with beneficiaries
Bradesco Saúde	National	National Together for health	Monitoring of chronic patients and anti-smoking	Improvement of quality of life and cost reduction with beneficiaries
Cassi	National	Estratégia da família	Promoção da saúde e a prevenção de doenças	Rational use of the accredited and specialized services network
Hapvida	Northeast	HapPrev and Viva Leve programs	Preventive medicine, self-care, and continuous monitoring of HapPrev participants - education and chronic monitoring with Viva Leve	Improvement of quality of life and cost reduction with beneficiaries
Intermédica	National	Support for patients with chronic diseases	Proactive and self-care monitoring	Improvement of quality of life and cost reduction with chronic beneficiaries
Nacional Unimed	National	Comprehensive health care strategy and health management program	Self-care and monitoring of self-care engagement for chronic patients	Improvement of quality of life in general and cost reduction with beneficiaries
SulAmérica	National	Active health program and sharecare application	Innovative technologies to monitor health conditions and engage beneficiaries in self-care activities	Improvement of quality of life and cost reduction with beneficiaries
Unimed BH	MG	Health promotion centers and health care program	Self-care, follow-up, and monitoring of chronic	Improvement of quality of life in general and cost reduction with beneficiaries
Unimed-Poa	RS	Living Well Program	Interactive channel with information on improving the quality of life for several groups, including chronic ones	Improvement of quality of life and cost reduction with specific beneficiaries and groups
Unimed-Rio	RJ	Health promotion and disease risk prevention programs - management of chronic, heart and pregnancy diseases	Self-care, follow-up, and monitoring	Improvement of quality of life and cost reduction with specific beneficiaries and groups
Unimedb (Sta Maria, RS)	RS	Telemonitoring program of chronic (telephone use)	Follow-up and monitoring of chronic	Improvement of quality of life and cost reduction with chronic beneficiaries

Hospitals rely on the development of a new market, preventive medicine, for which they have built structures with multiprofessional teams and the necessary equipment to carry out their work, with the central element of selling check-up tests; health insurers, on the other hand, have similar structures, but for the prevention and management of health aimed at health education, aiming mainly at cost reduction, what we see today is the business agents positioning themselves in search of new business opportunities and territorial expansion, while in public health, apparently, there are no initiatives for the use of telemedicine in SUS. This dichotomy can segment the provision of this service, leaving a significant part of the population at the mercy of the private payment logic, depriving those who cannot afford the values of the medical plans to the usual appointment scheduled in the health services¹⁰.

Conclusion

The experiences acquired as scholarship students, made it possible to develop several learnings during the activities during the internship period, where they had the

opportunity to practice active and qualified listening, cultivating work with ethics and humanization, having the benefit of learning from professionals active in the service and with professors from renowned institutions. Many academics seek the chance of this type of internship modality so that they can improve their professional and academic skills, experience a greater experience with patients and expand their knowledge and practice in the service. In the internship fields these students are able to exercise their propaedeutic knowledge, their communication skills and perform their activities with more experienced professionals in the service.

Despite the misfortunes that occurred, this year the AB had other gains, such as the possibility of developing activities with multiprofessional teams, participating in projects in other educational institutions, increasing practical and academic knowledge from other knowledge as well as assisting in scientific production and academic development of the country, through research carried out with the authorization of the proposing unit through the signature of the letter of consent in order to understand what problems and changes the pandemic caused in the routine of the health unit and in the treatment of patients.



With the loosening of the social distance measures allowed in the State of Rio, some academics made the choice to end their year of non-mandatory internship in the health units where they had been allocated, continuing the work previously developed and being able to apply all the knowledge they obtained from different sources during the year.

The opportunities that these students have when entering as scholarship scholars and the benefits acquired by it, go far beyond a simple certificate, it is the opportunity for growth, maturation, and professional, personal, and academic development.

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