

TELEMONITORING OF CHRONIC PATIENTS IN THE COVID ERA BY NURSING GRADUATES: AN EXPERIENCE REPORT

TELEMONITORAMENTO DE PACIENTES CRÔNICOS NA ERA COVID POR GRADUANDOS DE ENFERMAGEM: RELATO DE EXPERIÊNCIA

TELEMONITORIZACIÓN DE PACIENTES CRÓNICOS EN LA ERA COVID POR GRADUADOS DE ENFERMERÍA: RELATO DE EXPERIENCIA

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ABSTRACT

Objective: To report the experience of nursing students with chronic patient telemonitoring during the COVID-19 pandemic, emphasizing changes in nursing practice and skill development. **Method:** An experience report from 11 nursing students who conducted telemonitoring at a high-complexity philanthropic hospital, with data collection through descriptive narratives in the RedCap® system. **Results:** The students enhanced their communication and distant care skills, facing challenges such as incomplete data collection of patients. The experience highlighted the importance of professional self-care and adaptation to adverse conditions and social isolation. **Conclusions:** The telemonitoring experience was essential in preparing the students for emerging challenges in healthcare, underscoring the need to integrate telemonitoring practices into nursing education, preparing them for crisis scenarios and growing demands in telemonitoring and remote care.

Descriptors: Telemonitoring, Chronic Disease, COVID-19, Nursing.

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RESUMO

Objetivo: Relatar a experiência de estudantes de enfermagem com o telemonitoramento de pacientes crônicos durante a pandemia da COVID-19, enfatizando mudanças na prática de enfermagem e o desenvolvimento de habilidades. **Método:** Relato de experiência de 11 estudantes de enfermagem, que realizaram telemonitoramento em um hospital filantrópico de alta complexidade, com coleta de dados por narrativas descritivas no sistema RedCap®.

Resultados: As estudantes aprimoraram habilidades de comunicação e cuidado à distância, enfrentando desafios como coleta incompleta de dados dos pacientes. A experiência destacou a importância do autocuidado profissional e adaptação às condições adversas e isolamento social. **Conclusões:** A experiência com telemonitoramento foi essencial no preparo das estudantes para desafios emergentes na área de saúde, ressaltando a necessidade de integrar práticas de telemonitoramento na formação de enfermeiros, prepará-los para cenários de crise e demandas crescentes em telemonitoramento e cuidados remotos.

Descritores: Telemonitoramento, Doença Crônica, COVID-19, Enfermagem.

RESUMEN

Objetivo: Relatar la experiencia de estudiantes de enfermería en el telemonitorización de pacientes crónicos durante la pandemia de COVID-19, enfatizando cambios en la práctica de enfermería y el desarrollo de habilidades. **Método:** Informe de experiencia de 11 estudiantes de enfermería, que realizaron telemonitorización en un hospital filantrópico de alta complejidad, con recolección de datos por narrativas descriptivas en el sistema RedCap®.

Resultados: Las estudiantes mejoraron sus habilidades de comunicación y cuidado a distancia, enfrentando desafíos como la recolección incompleta de datos de los pacientes. La experiencia destacó la importancia del autocuidado profesional, la adaptación a condiciones adversas y aislamiento social. **Conclusiones:** La experiencia con el telemonitorización fue esencial en la preparación de las estudiantes para desafíos emergentes en el área de salud, destacando la necesidad de integrar prácticas de telemonitorización en la formación de enfermeiras, prepararlas para escenarios de crisis y demandas crecientes en telemonitorización y cuidado remoto.

Descriptorios: Telemonitorización, Enfermedad Crónica, COVID-19, Enfermería.

INTRODUCTION

Brazil's epidemiological transition, which began at the end of the 20th century, is characterized by an ageing population and a notable increase in Chronic Non-Communicable Diseases (CNCD).¹ These diseases account for the majority of the country's morbidity and mortality burden and are mainly represented by cardiovascular disease, cancer, chronic respiratory disease and diabetes.²

The monitoring of people with CNCDs is a priority in health services, either to reduce risk factors or to continue with the therapy adopted to control the chronic conditions in question, in line with advances in science and care technologies.¹ The recent advances in information and communication technologies and the possibility of applying them to health care make it easier for professionals and users to interact, even strengthening collaboration between the various levels of care.¹

Digital health monitoring and interventions are not a substitute for face-to-face healthcare, as there are currently many limitations to remote care compared to traditional care.³ However, the systematic use of this technology could lead to improvements in healthcare.

Regarding the legal support for telemonitoring activities by health professionals, Resolution No. 0634/2020 of the Federal Nursing Council (COFEN) validated these new procedures, especially in the context of the COVID-19 pandemic, for teaching, practice and research.⁴

Although there are regulations from the Ministry of Health and the professional councils for carrying out telemonitoring activities, in order for future health professionals to follow their principles of effectiveness, efficiency and efficacy in providing care, these activities should be included right from their training, in order to develop technical, scientific and ethical skills, respecting the individuality of the human being and the commitment to quality care.⁵

As an institution that trains human resources in the health sector, we are concerned about the issue of incorporating telemonitoring into health care training for students. With this in mind, this study aims to report on the experience of undergraduate nursing students with the telemonitoring of

chronic patients during the COVID-19 pandemic.

METHODS

This is an experience report in which 15 final year undergraduate nursing students from a higher education institution (HEI) located in São Paulo - SP were invited to take part. Of these, 11 agreed to take part in the full study. It is important to note that the telemonitoring activity involved students whose hospital practices were interrupted due to the resurgence of the pandemic in 2020.

The emergency telemonitoring activity was designed to monitor chronic patients at a high-complexity philanthropic hospital linked to the aforementioned HEI. During the month of May 2020, the students involved made telephone calls to patients and their families as part of the activities of the Hospital Curricular Internship II course.

In order to document this experience, the students were asked to write descriptive narratives about patient care via telemonitoring. The students were invited to take part in the study and after agreeing, they received the link to access the RedCap® electronic data collection system via e-mail. Data such as the participants' e-mail addresses and other identifiers were not stored on the RedCap® platform in order to ensure anonymity. Only data such as date of

completion, gender, color, marital status and place of birth were recorded. The research was submitted to and approved by the institutional Research Ethics Committee (CEP), under CAAE: 4.114.297 (33725720.0.0000.5479).

The study involved 11 students. In this type of research, numerical representativeness is not the focus, but rather the theoretical sufficiency of the data and its ability to answer the research question. The narratives were analyzed, grouped and coded, following the assumptions of thematic analysis⁶, resulting in two thematic categories: Adapting to a new reality in nursing care and Lessons learned and new possibilities for care.

PRESENTATION OF THE EXPERIENCE AND DISCUSSION

The data analyzed is grouped into the following themes. To illustrate the most important aspects of the content analysis, each excerpt used has been identified by the letter E (student), followed by a number.

Adapting to a new reality in nursing care

In this period of unprecedented change, nursing students faced the need to adapt quickly in order to continue monitoring patients with chronic illnesses. The transition to telemonitoring, although

challenging, proved to be a crucial and consolidated change in healthcare.

One student shared her initial skepticism about remote care, a perspective that changed significantly with the practice: *"Before I learned about Telemonitoring, there was, in my perception and, I believe, also among most students, a great deal of stigma and prejudice. However, practice, driven by the pandemic, has shown me the need for new methods of nursing care."* (E7)

Another student pointed out that telemonitoring offered a new perspective on caring for and communicating with patients and their families: *"Telemonitoring gave me another way of caring, from a distance, as well as the possibility of guiding the patient and the family."* (E3)

In addition, one student reflected on the challenges and lessons learned from the experience: *"The practice of telemonitoring was new for all of us. For me, it was particularly challenging. Establishing a bond with the patient and their family in person is already a challenge. Doing it over the phone became even more complex. This experience taught me a lot about new ways of interacting with patients and their families."* (E6)

These accounts illustrate how the experience of telemonitoring during the pandemic was crucial to overcoming initial prejudices, learning new communication and care skills at a distance and adapting to an ever-changing reality in nursing.

In short, the students' textual narratives brought up interesting aspects such as breaking the paradigm related to

distance care, which is now considered prominent and promising in the nursing field.^{7,9} Other aspects observed were: the challenges in remote communication, mainly related to establishing a bond and empathetic communication with the patient in the midst of a lack of face-to-face interaction.

Telemonitoring has increased the skills and competencies of nursing students, particularly in communication and remote care, preparing them for crises and situations with restricted access to the patient. A study in Japan during the COVID-19 pandemic also showed improvements in the *telehealth* skills⁵ of students, who improved consultation techniques, identification of patients' self-care problems and effective communication, adapting to patients' needs, similar to this study.

Other studies highlight the importance of *telehealth* in future nursing education and practice. They emphasize that experience with *telehealth* is vital to prepare students for a scenario where remote care will be a key component in healthcare.⁷⁻⁹ It highlights the need to integrate *telehealth* into nursing education, expanding activities in this way and using resources efficiently to improve health care.

Lessons learned and new possibilities for care

According to one of the interviewees, adapting to the new pandemic reality revealed the need for self-care, in order to be able to care for others. From a distance, patients and students protected themselves from contagion by the disease, without losing sight of care as a professional attribution and social responsibility: *"The world is trying to adapt to the new reality and it has taught us that we need to take care of ourselves and others, to be kind, to offer help to those who need it most, with great social impact."* (E1)

The activities also made it possible to contact patients and families after COVID-19 hospitalization: *"The Telemonitoring activity was very rich for my learning, it was a continuity in the assistance provided during hospitalizations to patients of the [hospital institution], with this I was able to observe how valid it was to contact a family member or even the patient, who thanked the assistance provided during their hospitalization and post-discharge."* (E6)

The experience allowed the students to recognize some of the roles of nurses in health care under adverse conditions, such as adapting to the current reality and making rational use of the resources available in a given reality, as described below: *"It was an enriching experience that allowed us to work with different tools for communicating with patients and to understand the great contribution made by nurses in the healthcare learning process. It also demonstrated our ability to adapt when it comes to health care in challenging times like the one we live in today, where*

it is necessary to rethink and adapt our practices to the new reality of social isolation." (E2)

For two of them, learning related to collecting patient data was reinforced, which is crucial for any planning of continuity of care, an important aspect to be considered post-discharge.

"It was a unique experience, and especially realizing the importance of filling in all the patient's information correctly, as there was a lot of difficulty in giving continuity in post-discharge care, the lack of important information such as correct telephone number, address, companion data, diagnosis and proposed treatment are fundamental for the successful conclusion of the telemonitoring guidelines for the patient." (E4)

"As well as being a new way of learning, very innovative for us students, it was a unique opportunity to accompany patients even when they had already been discharged." (E8)

For one of the students, the balance of the experience was the preparation for an emerging area in the job market: *"Carrying out telemonitoring was a great experience, given the current world scenario and the potential opportunities in this area in the job market." (E5)*

The student's perception of the health professional's self-care stands out in this topic, an aspect that has been explored in studies that have looked at job satisfaction and self-care among professionals who worked on the front line during the pandemic. Discussions on this topic are still ongoing today. It was possible to see that adapting to a new reality shaped the learning and nursing practice of these students,

particularly in adverse conditions and social isolation, as observed in other studies⁹⁻¹¹.

Telemonitoring experiences during the pandemic provided nursing students with a unique opportunity to develop crucial communication skills for care planning and establishing effective therapeutic relationships at a distance. In addition, these practices allowed students to apply acquired knowledge and continue their learning process, addressing topics such as interdisciplinary work, public policies, human rights and knowledge about service networks. However, they faced practical challenges, such as the lack of complete information on patient admission, which affected continuity of care. This experience also proved valuable in preparing students for the job market, equipping them for the growing demands in areas such as telemonitoring and remote care.

This study on telemonitoring by nursing students faces limitations, including a sample restricted to one institution and potential selection bias from non-randomized participants. In addition, the subjective nature of the reports may limit the generalizability of the results. The lack of a control group makes it difficult to directly attribute effects to the program. Data collection based solely on descriptive narratives can restrict the depth of information. However, it was not the

intention of this report to report the robustness of these students' experience, but rather to inform the scientific community about an adaptive and successful strategy employed in times of pandemic. This report has the potential to prompt reflections on the importance of *telehealth* in the training of future nursing professionals and in improving care for chronic patients, ensuring continuity of care.

CONCLUSIONS

This study highlights the relevance of adapting care to the new reality. Nursing students developed essential telemonitoring skills during the COVID-19 pandemic, improving communication and remote care, both of which are vital for effective therapeutic relationships and care planning. The experience made it possible to apply the knowledge acquired and expanded learning in interdisciplinary work, public policies and human rights. By facing challenges such as incomplete patient data collection, the students realized the importance of details for continuous post-discharge care.

The report highlights the need to prepare for future challenges in the market, particularly in telemonitoring and remote care. These insights are key to incorporating adaptation and innovation into nursing practice, empowering professionals to face

crises and respond to constantly evolving health demands.

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