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TECHNOLOGY THAT KEEPS UP: INNOVATIONS IN HOME CARE FOR PRIMARY CARE

TECNOLOGIA QUE ACOMPANHA: INOVAÇÕES NO CUIDADO DOMICILIAR PELA ATENÇÃO PRIMÁRIA

TECNOLOGÍA QUE SE MANTIENE AL DÍA: INNOVACIONES EN ATENCIÓN DOMICILIARIA PARA ATENCIÓN PRIMARIA

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ABSTRACT
To describe the process of implementing telemonitoring as a tool to qualify home visits in a Primary Health Care Unit in Fortaleza, Ceará. A survey of clinical and epidemiological data was carried out on patients monitored during home visits, with subsequent analysis of the data discussed by the team, defining patients eligible for telemonitoring. A profile was identified in which the majority of patients are female and 74.5% of the total are over 70 years old. In addition, the majority only have limited mobility, do not use disposable diapers and do not require monitoring by specialized teams. After the survey, it was possible to apply a risk and vulnerability scale and implement telemonitoring, resulting in insulin dose adjustment, identification of respiratory symptoms and improvement in schedule management. It was possible to raise important questions and report the simple and quick use of telemedicine in favor of quality and planning of home care.
Keywords: *Public Healthy; Home Care; Telemonitoring.*

RESUMO
Descrever a implantação do telemonitoramento como ferramenta de qualificação da visita domiciliar (VD) em uma Unidade de Atenção Primária à Saúde de Fortaleza-CE. Foi realizado levantamento de dados clínico-epidemiológicos de pacientes acompanhados em VD, com posterior análise dos dados discutida em equipe, definindo os pacientes elegíveis ao telemonitoramento. Identificou-se perfil em que a maioria dos pacientes são do sexo feminino, apresentam apenas limitação de mobilidade, não fazem uso de fraldas e não necessitam de acompanhamento com equipes especializadas, além de 74,5% do total estar acima de 70 anos. Após o levantamento, foi possível aplicar escala de risco e vulnerabilidade e implantar o telemonitoramento, tendo como resultados a realização de ajuste de dose de insulina, a identificação de sintomático respiratório e a melhoria na gestão da agenda. Foi possível suscitar questões importantes e relatar o uso simples e rápido da telemedicina a favor da qualidade e do planejamento da VD.
Descritores: *Saúde Pública; Assistência Domiciliar; Telemonitoramento*.

RESUMEN
Describir el proceso de implementación de la telemonitorización como herramienta de calificación de las visitas domiciliarias en una Unidad de Atención Primaria de Salud en Fortaleza-CE. Se realizó un levantamiento de datos clínico-epidemiológicos de los pacientes monitoreados durante las visitas domiciliarias, con posterior análisis de los datos discutidos por el equipo, definiendo los pacientes elegibles para la telemonitorización. Se identificó un perfil en el que la mayoría de pacientes son mujeres y el 74,5% del total tiene más de 70 años. Además, la mayoría de ellos tienen movilidad limitada, no utilizan pañales desechables y no requieren seguimiento por equipos especializados. Luego de la encuesta, fue posible aplicar una escala de riesgo y vulnerabilidad e implementar el telemonitoreo, dando como resultado ajustes de dosis de insulina, identificación de síntomas respiratorios y mejoras en la gestión de agenda. Fue posible plantear cuestiones importantes y reportar el uso simple y rápido de la telemedicina en favor de la calidad y planificación de la atención domiciliaria.
Descriptores: *Salud psicológica; Atención Domiciliaria de Salud; Telemonitorización.*

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INTRODUCTION

According to the Ministry of Health (MS), Home Care (HC) can be defined as a type of health care integrated with the Health Care Networks (HCNs) and consisting of strategies aimed at treating diseases, rehabilitation and palliation performed at home, with guarantees of continuity of care. The services responsible for carrying out HC are the Primary Health Care (PHC) teams and the Home Care Services (HCS) of each Municipality[1].

The importance of HC in Brazil is related to the understanding of the principles of Equity and Universality of the Unified Health System (UHS), since the multidisciplinary consultation carried out at home guarantees access to health for patients with limited mobility and provides reserved times in the schedules of PHC professionals to carry it out[2].

Currently, a home visit (HV) at a Primary Health Care Unit (PHCU) can be requested through three main means: request from family members of a patient with mobility limitations, identification of specific cases by team members or through other HCN services that request the evaluation and monitoring of a specific patient[2].

However, when establishing HC in a PHCU or HCS, it is essential that eligibility criteria are followed for the patient in question and that visits are planned in order to follow a care plan, setting goals and objectives that give meaning to monitoring and improve or maintain the patient's health condition[3].

In practice, a problem involving the effectiveness of HC in PHC is related to variations in the availability of cars and supplies to carry out visits, with limitations also in the management of the schedule, which often does not allow for a number of visits compatible with the complexity of the patients, hindering their follow-up[2,4].

One possible strategy to minimize this problem is the implementation of teleconsultations by PHC teams for patients already being followed in HC in order to monitor various aspects of their clinical condition, such as medication adherence, symptom control, and the effects of the therapy instituted in a previous in-person visit. After the COVID-19 pandemic, telemedicine became more popular and its potential as a patient monitoring tool was more widely accepted. Its application in PHC is an excellent opportunity to maintain adequate surveillance for patients with physical, mental, or social limitations in accessing the PHCU. In addition, it is plausible because it makes the teleconsultation schedule more flexible according to the health professional's schedule in advance with patients and caregivers[5].

The definitions of the types of telemedical care are provided for in resolution no. 2,314/2022, published by the Federal Council of Medicine (CFM), which defines telemedicine in Brazil. This report will use the terms teleconsultation and telemonitoring as defined in the resolution.

The general objective of this study is to describe the process of implementing telemonitoring as a tool to qualify home visits made by a team from a PHCU in Fortaleza, Ceará. In addition, it aims to promote the training of Community Health Agents (CHAs) who are part of the team on the indications for HV.

METHODS

The organization of the home visit requires an adequate assessment of the patients' clinical history to ensure equity, given the limited availability of resources and time to carry them out. In a scenario in which visits are defined based on information provided by CHAs about patients in the area, it is possible that an inappropriate bias in priorities may be established, neglecting patients who are most in need of assessment[4]. Thus, team 645 at PHCU Alarico Leite, in Fortaleza-CE, scheduled its visits from March 2022 to June 2024 in an organized manner, based on a table prepared for its own control, which contains data considered relevant for evaluation, such as the patient's full name, responsible caregiver, address, contact telephone number, CHA responsible for the area, date of the last HV, score and classification on the Pinheiro et al risk and vulnerability scale, score on the palliative performance scale (PPS), use or not of diapers, total restriction to bed or not, date of the last exams and whether there is the possibility of carrying out teleconsultations with that family or not.

The team has two to four visiting shifts per month, varying according to scheduling needs at the PHCU. Each shift lasts four hours, with a maximum of five visits per shift, allocating 48 minutes per visit. When planning the visiting schedule, the team – composed of a preceptor doctor, resident doctors in Family and Community Medicine, and a nurse – reviewed the electronic medical record to assess pending clinical issues, current medications, and laboratory test results. On the scheduled day, the visiting box was also prepared in advance to ensure basic equipment for measuring vital signs was available.

The telemonitoring implementation process consisted of three stages. First, data was collected using a table created by the team's professionals to understand the sociodemographic profile of the patients being monitored. The electronic medical records of all patients visited were also reviewed to assess the number and frequency of visits, as well as the clinical data inherent to each case.

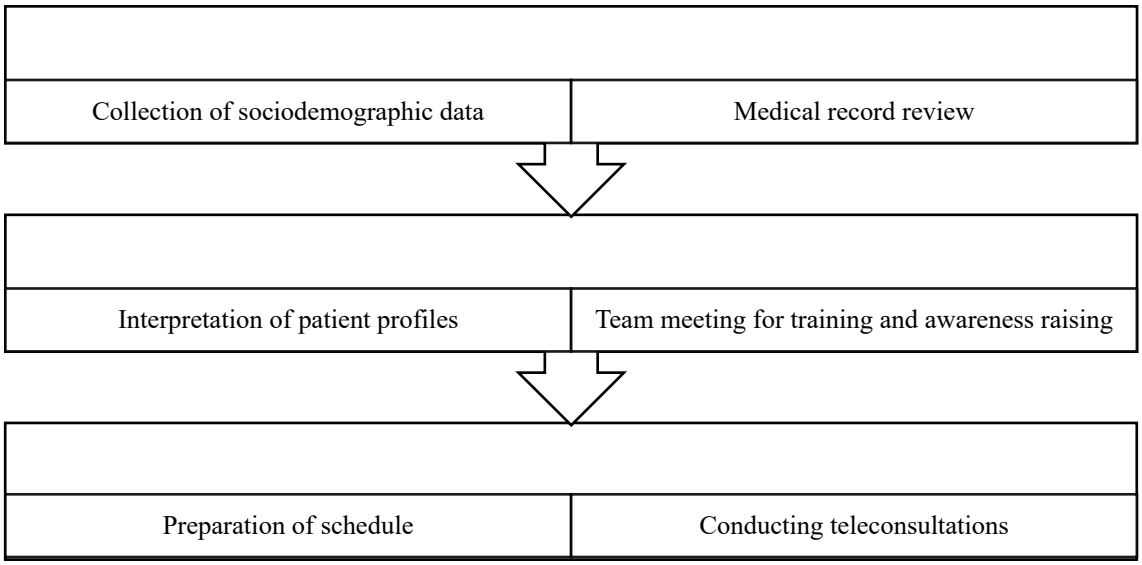
Second, after compiling and evaluating the data, a meeting was held with the team's CHWs to review the criteria for indicating HV and present the data. The meeting also included a discussion of the patient follow-up scenario. It was also possible to discuss the family risk stratification and risk and vulnerability assessment tools already established in the literature, which guide the frequency with which patients should be reassessed[7]. The CHWs demonstrated an understanding of the need for clear criteria for indicating HV and the importance of maintaining adequate patient follow-up.

Subsequently, as a final step, teleconsultations were initiated for monitoring purposes, with recording in electronic medical records and verbal consent from the patient and/or their guardian. An institutional telephone number from the PHCU was used, and patients considered eligible for teleconsultation were those with access to video calls via a mobile app and who agreed to receive the teleconsultation by signing the Free and Informed Consent Form (FICF).

The group considered a priority for initiating telemonitoring was that classified as "very high risk," according to the Scale for Classifying Risk and Clinical Vulnerability for Patients on Home Visits in PHC, by Pinheiro et al.7 A schedule for teleconsultations was developed and agreed upon with the CHAs, providing prior

guidance to patients and their caregivers regarding the implementation, informing them of the day on which the call would be made.

Flowchart 1 – Outline of research steps



RESULTS

Data on the clinical and sociodemographic profile of patients already being monitored in HC were analyzed in a simple way, by percentage, and showed that most patients are female and 74.5% are over 70 years old. Furthermore, most have limited mobility, do not use disposable diapers, and do not require follow-up with a Multidisciplinary Home Care Team (MHCT). Regarding the risk and vulnerability profile, according to the Pinheiro et al. Scale[7], 81.4% of patients were considered at high or very high risk.

The data was evaluated with the CHWs who make up the team during a very enriching meeting about the insights that home care provides. It was understood that teleconsultations, for monitoring purposes, would be important to help make HV more effective. Therefore, an agreement was reached on the selection of the first patients to receive teleconsultations, and a schedule was developed in which the CHWs would advise families about date and time of the scheduled video call.

The first calls were then made and no failures or connection problems were detected, making it possible to make video calls in a clear and understandable manner.

Initial clinical outcomes demonstrated the strategy's effectiveness: in a case of difficult-to-control diabetes mellitus, the insulin dose was adjusted based on the glycemic chart presented during the video call, with a reassessment three days later and the glycemic target achieved. In another case, an elderly patient was evaluated for suspected tuberculosis and prioritized for an in-person visit. The reorganization of the care schedule also allowed for greater resource rationalization, prioritizing in-person visits for patients at higher risk of clinical instability.

Patients and caregivers expressed satisfaction with the new form of care, recognizing the bond established even from a distance.

DISCUSSION

The findings of this study corroborate the literature on the challenges of home care in Primary Health Care (PHC), especially in the context of population aging and the increasing prevalence of chronic conditions. The clinical profile identified is consistent with the HC1 patient type, as classified by the Ministry of Health, which justifies their monitoring by the PHC team, provided there is adequate organizational support[1,2].

Regarding the team's evaluation, all members who participated in the process realized that the monitoring of patients in HC was inadequate, requiring improvement in terms of indication and continuity of care, in order to make assistance more effective.

The use of communication technologies proved technically feasible, with good user acceptance and the ability to generate measurable clinical impacts, such as improved glycemic control and early detection of health problems. Furthermore, the involvement of CHA in the process reinforces the importance of a multidisciplinary team and regional engagement in the success of interventions.

The main limitation of this study is the lack of a systematic assessment of user perceptions and medium-term clinical outcome indicators. Nevertheless, initial results point to the relevance of telemonitoring as a complementary strategy to in-person visits, especially in contexts where PHC teams are overburdened.

FINAL CONSIDERATIONS

This study raised important questions related to the organization of home visits in PHC and contributed to reporting the possibility of implementing telemedicine quickly and easily, helping to resolve long-standing issues related to HC in PHC. However, it was not possible to expand the clinical and sociodemographic assessment of patients due to insufficient data recorded in medical records – a fact that reinforces the importance of adequate recordkeeping. Furthermore, regarding patient data security and confidentiality during teleconsultations, an institutional telephone was used, with contact with patients occurring only during unrecorded video calls and after their verbal consent was recorded in an electronic medical record, thus reducing the risks associated with the practice.

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