

Nurses And Digital Health: Aspects Between Protagonism, Visibilities And Experiences

Enfermeiras e a Saúde Digital: Aspectos Dentre Protagonismo, Visibilidades e Vivências

Enfermeras y Salud Digital: Aspectos Entre Protagonismo, Visibilidades y Experiencias

RESUMO

A atuação da enfermagem no contexto de saúde digital na região Amazônica. Relato de experiência baseado na participação de três enfermeiras do Núcleo de Telessaúde no Pará entre 2021/2024. Destaca a implantação da tele-educação (webconferências/cursos) baseados nas necessidades dos profissionais de saúde. A teleconsultoria implantada em 05 municípios. E a teledermatologia com apoio a regulação implantada em Belém, como projeto piloto, e mais 04 municípios. O tele-eletrocardiograma implantado em 04 municípios e a telerradiologia, em apenas 02. O envolvimento das enfermeiras no processo de implantação de saúde digital traz perspectivas de melhorias no serviço de saúde, considerando estratégias de intervenções baseadas na vivência do SUS, no apoio da gestão e no investimento em tecnologia em saúde.

DESCRIÇÕES: Telessaúde; Enfermagem; Saúde na Amazônia; Saúde digital.

ABSTRACT

The role of nursing in the context of digital health in the Amazon region. Experience report based on the participation of three nurses from the Telehealth Center in Pará between 2021/2024. Highlights the implementation of tele-education (web conferences/courses) based on the needs of health professionals. Teleconsulting implemented in 05 municipalities. And teledermatology with regulatory support implemented in Belém, as a pilot project, and 04 other municipalities. Tele-electrocardiogram implemented in 04 municipalities and tele-radiology, in only 02. The involvement of nurses in the digital health implementation process brings prospects for improvements in the health service, considering intervention strategies based on the experience of the SUS, management support and investment in health technology.

DESCRIPTORS: Telehealth; Nursing; Health in the Amazon; Digital health.

RESUMEN

La actuación de la enfermería en el contexto de la salud digital en la región Amazónica. Relato de experiencia basado en la participación de tres enfermeras del Núcleo de Telessaúde en Pará entre 2021/2024. Destaca la implementación de la teleeducación (videoconferencias/cursos) basada en las necesidades de los profesionales de la salud. La teleconsultoría fue implantada en 5 municipios, y la teledermatología con apoyo a la regulación en Belém, como proyecto piloto, y en otros 4 municipios. El teleelectrocardiograma se implementó en 4 municipios y la telerradiología, en solo 2. La participación de las enfermeras en el proceso de implementación de la salud digital trae perspectivas de mejora en el servicio de salud, considerando estrategias de intervenciones basadas en la experiencia del SUS, el apoyo de la gestión y la inversión en tecnología en salud.

DESCRIPTORES: Telessaúde; Enfermería; Salud en la Amazonía; Salud digital.

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Experience Report

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INTRODUCTION

Nursing involved in the implementation of the Telehealth System in the northern region of Brazil. Service linked to the University Hospital of the Federal University of Pará (UFPA). Funded by the Secretariat of Digital Health and Information (SEIDIGI) of the Ministry of Health (MS). Expansion of digital health within the scope of the Unified Health System (SUS) in the territory of the Amazon of Pará. Strengthening and consolidation of Health Care Networks, ordered by Primary Care. Complying with the guidelines of the National Telehealth Brazil Networks Program and by Ordinance MS No. 2,546/2011⁽¹⁾.

This Experience Report aims to give visibility to nursing among its multiple insertions of care for the individual and community in the context of Public Health under the intricacies of digital health. The work was developed by three nurses in different roles during the implementation and execution of the services provided by the Telehealth Center of the UFPA Hospital Complex. This importance has legal support legitimized by the Federal Nursing Council (COFEN) in light of Resolution

696 published in 2022. A legal standard that deals with the role of nurses in the area of digital health and tele-Nursing⁽²⁾.

These are nurses linked to the Telehealth System, 02 as a Technical Reference and 01 linked to the management and continuing education of Primary Health Care (PHC) professionals. They are health workers and researchers committed to theoretical, epistemological and technical contributions to the social health needs of the community in the field of construction and reflection on public health. Entangled with the National Digital Health Policy on the rise in the Amazon region.

These professionals make up a multidisciplinary team, with training that is equally important for the successful expansion of the Telehealth service. In this process, nursing stands out for being directly involved in the services of the Health Care Networks. Among their functions with the implementation of the digital system, they provide training for knowledge and mastery of the platform and the services offered for teleconsulting, teliagnosis and tele-education for doctors and nurses. They present the service to municipal managers, promote and execute other possible viability for digital health to happen.

METHOD

This is an experience report based on the participation of three nurses from the Telehealth Center (NUTS) in the North region of the country, between 2021 and 2024. The experience described includes the participation of nurses in the process of implementing the Tele-education service and implementing the Teleconsultation and Teliagnosis services.

The Tele-education service was the first to be implemented by NUTS, under the coordination of a nurse. This service included offering monthly web conferences on topics of interest to PHC and offering self-instructional courses. Needs were identified by sending an electronic form to health professionals in the municipalities, with the purpose of identifying their priority demands for training and topics of interest.

At the same time, the virtual platform for the web conferences was chosen. The RNP Web Conference platform was used, accessible to health professionals in the region. After needs were identified, an agenda and topics for monthly web conferences were defined. Qualified speakers. Activities foreseeing dates and times suit-

able for greater participation of professionals. Dissemination strategies, using digital media and direct contact with municipal managers. On the scheduled day and time, the web conferences were coordinated and mediated by the nurse coordinating the service.

The creation of self-instructional courses ordered by the tele-education coordinator nurse followed the problem-solving methodology, integrating theory and practice for professional qualification in PHC. The educational needs assessment was processed, learning objectives were defined and interactive content, such as e-books, videos, animations and podcasts, was developed. The project involved a multidisciplinary team.

Later, Teleconsulting and Telediagnosis were implemented to support health professionals in clinical and operational doubts, enabling agile interactions with specialists from different areas, as well as assisting in diagnosis, covering modalities such as teledermatology, tele-electrocardiogram and teleradiology. Team training and promotion of the service in municipalities were essential for its implementation.

Initially, negotiations were conducted by the coordination team. Considering the need for periodic contact and on-site training of professionals, two nurses with experience in management and/or primary care were hired. As technical references for the center in conjunction with the municipalities, they conducted agreements between the municipalities and the center, as well as the entire process of training professionals, management and monitoring of the offer.

The teleconsultation training followed a structured step-by-step process, led by the Telehealth technical nurse. Among the agreements with the municipal manager; presentation and training of professionals including guidance on the flow of sending and receiving teleconsultations and practical demonstration of the use of the tool.

Regarding telediagnosis training, a more detailed process was included, considering the specific service offerings, which are: teledermatology, tele-electrocardiogram, and teleradiology. To implement the

tele-electrocardiogram, the diagnostic situation of the municipalities was analyzed, and actions were planned with health departments and managers of the establishments. The requesting and executing units and the professionals for training in the use of the platform were listed. Regarding teleradiology, the implementation of this tool stands out as the pioneering of this teleradiology service in Pará, in the municipality of Ananindeua, which began in September/2024.

As for the implementation and implementation of the teledermatology offering, the municipality of Belém was chosen to implement the pilot plan, since initial attempts in other municipalities were not very promising. The pilot plan began in one of the administrative and health districts of the capital of Pará.

RESULTS

The Tele-education service has shown significant results throughout the implementation period. The topics covered and the increase in the number of accesses to the web conferences reflect the growing interest and engagement of professionals considering the particularities of the Amazon region. A relevant work containing this information on Digital Technologies for Health Education was also presented at the 11th Brazilian Congress of Telemedicine and Telehealth held in 2024.⁽³⁾

Between 2022 and 2024, there were a total of 26 web conferences with considerable participation of 1,265 users, synchronously and monthly, operationalized with specific themes for professionals working in primary health care in the state and made available on the telehealth center website. With accesses distributed in: 143 in the year 2022, 944 in the year 2023 and 178 until January 2024. Among the users of synchronous access, there were 96 exchange students from the Mais Médicos para o Brasil (PMMB) Project and 51 PMMB doctors trained in Brazil, and 1,118 professionals from different categories⁽³⁾.

The creation of two self-instructional courses resulted in the qualification of

PHC professionals in strategic topics, offered in a virtual learning environment on the Moodle platform, structured with three modules. The course Work Process in PHC addressed the SUS, the organization of teamwork and care management. The course Surveillance of Congenital Syphilis and in Pregnancy aimed to expand knowledge about the prevention and management of syphilis, aligned with health policies. With good adherence, it met the educational needs of professionals in the region.

The Teleconsultation service (asynchronously) presented to municipal managers by nurses was implemented in the 5 municipalities without regulatory support, an important modality for controlling unnecessary referrals to specialized services, as it linked the user's evaluation to the platform's specialist professional to proceed with the regulatory process. However, it did not receive support from municipal managers.

Telediagnosis was presented to several municipalities in the state of Pará, as a tool to support health professionals during the clinical evaluation of SUS users. Only 4 municipalities, of those monitored by nurse RTs, met the minimum requirements for implementing Tele-electrocardiogram and 2 for Teleradiology, which is characterized as the most recent service in operationalizing telediagnosis on the Telehealth platform.

The teledermatology service implemented in Belém, as a pilot project, began with a survey, by the nurse, of the pent-up demand for dermatology in each of the Municipal Health Units (UMS) and Family Health Teams (ESF). There was a long wait for a dermatological evaluation. With the operationalization of the Telehealth System in Teledermatology, there were expectations of solving this problem of inaccessibility to this specialty. Of the exams reported by the tele-dermatologist in 72 hours, the majority indicated retractable care in the PHC or without the need for intervention (53% blue and white reports). Part of this data was also published at the 11th Brazilian Congress of Telemedicine and Telehealth⁽⁴⁾.

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In accordance with the protocols of the Ministry of Health and the Society of Dermatology, teledermatology reports indicate a risk classification. This marker indicated special attention to exams reported with a yellow risk classification (priority for the referral clinic) and green (for in-person clinical-surgical evaluation). The situation is monitored by the nurse regarding registration in the Regulatory System (SIS-REG).

In order for the APS to understand the effective process of the teledermatology service connected to SISREG, successive informative and pedagogical approaches were carried out. In the detailed details for operating the tediagnosis services, both for medical professionals and managers and also for SISREG operators/administrators. The service proved to be effective and was extended to all other administrative and health districts. Nurses were immersed in the implementation and deployment of this digital technology. It should also be added that teledermatology was implemented in four other municipalities. Only Belém involved municipal regulation in the flow of the service.

DISCUSSION

This experience of nursing professionals in the context of digital health is promising. With the educational process strongly experienced when using Telehealth to train professionals working in UMS and ESF. Also with a focus on the implementation of services related to the production and provision of tediagnosis in Belém, extending to other municipalities.

Telehealth is a service that, among other aspects, subsidizes the care and conduct of professionals in addition to supporting clinical decisions. It requires pedagogical intervention and the involvement of professionals. There are technological and connectivity advances evident in several territories of the Amazon region of Pará, but there are places still without stable and quality alternatives for access to digital connectivity. Despite the barriers, the materiality of digital health in the state of Pará

under the management of UFPA and the University Hospital Complex⁽⁵⁾ is advancing. With the participation of nurses with a master's degree in public health in the intertwining of the "National Telehealth program [...] which aims to improve the qualification of health professionals and their teams throughout the national territory (6, p. 13321)".

In the Amazon region, in order to benefit from network projects, since wherever there is a connection it is possible to access information⁽⁷⁾, it is necessary to reflect and guide the concrete possibility of continuing education via telehealth based on tediagnosis: "Telehealth is seen as a means of transforming educational practices, collective participation and social control in the health sector. Considering it a highly complex task due to the country's large geographical expansion (6, p. 13,322)".

Nursing is immersed in this process. In the service and management, it has triggered several educational interventions to implement Teledermatology and Tele-electrocardiogram. With involvement in ongoing training related to knowledge of the digital platform, registrations from the workplace, application of methods both at the level of health establishments and in specific visits with workers who manage and feed the platform and regulatory system. The technical and educational process goes from the presentation to the follow-up provided by SISREG monitoring⁽⁸⁾.

The Tele-electrocardiogram and teleradiology services, which consist of issuing reports based on the sending of images from a digital device, highlighted the need for investment in diagnostic support technology by municipal administrations. The application of technology in primary health care highlights clinical advantages, costs and benefits for both users and health workers⁽⁹⁾.

It is also understood that management played a fundamental role in the successful implementation of telehealth services in municipalities⁽¹⁰⁾. The role of nursing and the experience of nurses as SUS workers stands out in the dialogue with the municipal manager⁽¹¹⁾. By creating the compulso-

ry flow as a way to guarantee the use of the digital service to increase the resolution of PHC and reduce the demand for specialized services⁽¹²⁾.

CONCLUSION

It is also understood that management played a fundamental role in the successful implementation of telehealth services in municipalities⁽¹⁰⁾. The role of nursing and the experience of nurses as SUS workers stands out in the dialogue with the municipal manager⁽¹¹⁾. By creating the compulsory flow as a way to guarantee the use of the digital service to increase the resolution of PHC and reduce the demand for specialized services⁽¹²⁾.

In this sense, the work of nurses in digital health has shown prospects for improvements in health services, considering intervention strategies based on the experience of the SUS and the problems that permeate care networks and the investment in technologies by municipal managers. In addition, there is a need to expand the use of digital services to other professional categories in the work team, as a strategy for producing care and intervening in the health of the population.

It is nursing producing connection points. That's right, nurses and Public Health Nursing practices related to digital health reaffirming that they have an important place in caring for the population. Promoting and providing real benefits to society.

REFERENCES

- 1 Ministério da Saúde. Portaria nº 2.546, de 27 de outubro de 2011 [Internet]. Vol. Seção 1, Diário Oficial da União. Brasília, DF: Poder Executivo; 2011. p. 50. Disponível em: http://bvsmis.saude.gov.br/bvs/saudelegis/gm/2011/prt2546_27_10_2011_comp.html Acesso em: 08 jan 2025.
- 2 Conselho Federal de Enfermagem COFEN. Resolução nº. 696 de 17 de maio de 2022. Dispõe sobre a atuação da Enfermagem na Saúde Digital, normatizando a Telenfermagem. DOU nº 96, de 23 de maio de 2022; seção 1.
- 3 Lopes LJS, Almeida JR, Carmo MMD, Santos RP, Faro NF, Bastos MSCBO. Educação Permanente na Atenção Primária à Saúde: A experiência do telessaúde vinculado a um hospital universitário no Pará. Anais do XI Congresso brasileiro de Telemedicina e Telessaúde; 11-14 de abril 2024; Goiânia, Brasil. Disponível em: <https://sistemacenacon.com.br/evento/cbtt2024/trabalhosaprovados/naintegra/3221>
- 4 Soares RDP, Torres MGM, Faro NF, Durval RO, Bastos MSCBO. Implantação da Teledermatologia em Belém-PA: avanços e desafios da saúde digital no contexto amazônico. Anais do XI Congresso brasileiro de Telemedicina e Telessaúde; 11-14 de abril 2024; Goiânia, Brasil. Disponível em: <https://sistemacenacon.com.br/evento/cbtt2024/trabalhosaprovados/naintegra/3232>
- 5 Bastos MSCBO. Núcleo de telessaúde do complexo hospitalar universitário da UFPA. Projeto submetido ao Ministério da Saúde/Secretaria Executiva/Departamento de Saúde Digital; 2020 p. 13.
- 6 Andreza MNS, RatsJGB, Diniz CLF, Cartaxo NL, Nascimento JM, Dantas JVS, Magalhães AG, Santana WJ. A telessaúde como instrumento de educação e saúde. Brazilian Journal of Development, Curitiba, v.9, n.4, p.13319-13330, abr., 2023. Disponível em: <https://ojs.brazilianjournals.com.br/ojs/index.php/BRJD/article/view/58861/42762> Acesso em: 05 jun. 2024.
- 7 Rocha R, Camargo M, Falcão L, Silveira M, Thomazinho G. A Saúde na Amazônia: Legal Evolução Recente e Desafios em Perspectiva Comparada. 2021, Estudos institucionais 04, Instituto de Estudos para Políticas de Saúde. Disponível em: <https://amazonia2030.org.br/wp-content/uploads/2021/11/A-Saude-na-Amazonia-Legal.pdf>
- 8 Pinto ICM, Esperidião MA (organizadoras). Política nacional de educação permanente em saúde: monitoramento e avaliação. Salvador: EDUFBA, 2022.
- 9 Vasconcelos MKS, Prado MML, Silva AJR, Barroso AIA, Machado LMC, Azevedo MF, Andrade FCR, Menezes JGP et al. Impacto das tecnologias de saúde na Atenção Primária à Saúde para atendimento e gestão. Brazilian Journal of Implantology and Health Sciences. Vol. 6, Issue 4, 2024. Disponível em: <https://bjih.emnuvens.com.br/bjih/article/view/1863/2113>. Acesso: 07 jan de 2025.
- 10 Maeyama MA, Calvo MCM. A Integração do Telessaúde nas Centrais de Regulação: a Teleconsultoria como Mediadora entre a Atenção Básica e a Atenção Especializada. Rev. bras. educ. med. SC, 2018. Disponível: <https://doi.org/10.1590/1981-52712015v42n2RB20170125>. Acesso: 07 jan de 2025.
- 11 Celes RS, Rossi TRA, Barros SG, Santos CML, Cardoso C. A telessaúde como estratégia de resposta do Estado: revisão sistemática. Rev. Panam Salud Publica, 2018. Disponível: <https://pmc.ncbi.nlm.nih.gov/articles/PMC6385855/>. Acesso: 04 jan de 2025
- 12 Fortuna CM, Matumoto S, Mishima SM, Rodríguez AMMM. Collective Health Nursing: desires and practices. Rev Bras Enferm [Internet]. 2019;72(Suppl 1):336-40.

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