

Telenursing in COVID-19 times and maternal health: WhatsApp® as a support tool

Telenfermagem na COVID-19 e saúde materna: WhatsApp® como ferramenta de apoio
Telenfermería durante la COVID-19 y salud materna: WhatsApp® como herramienta de apoyo

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Abstract

Objective: To describe the process of creating “Talk to the Midwife Recife - PE” as a telenursing service using WhatsApp® as a support tool to promote maternal health in the COVID-19 pandemic.

Method: This is an experience report type study. The creation of “Talk to the Midwife Recife - PE” followed the recommendations of the Institute of Medicine and the Health Care Quality Committee of America in relation to the provision of health care. Remote and virtual work with construction of a layout for WhatsApp® and an Informed Consent Form were used to authorize teleguidance. The data was stored in electronic records. The selection criteria to compose the team of nurse-midwives were being available and acting voluntarily, living in the metropolitan region of Recife-PE and having experience in nursing-midwifery. Activities began on March 19, 2020.

Results: In total, 56 nurse-midwives worked in teleguidance. In three months, 2,300 users received teleguidance with an average time of 20 minutes, 43% were in the third trimester of pregnancy, 21% in the second and 13% in the first trimester, 7% were mothers. In order to support teleguidance, instant messages were built according to pregnant women’s and puerperal women’s needs and a protocol on obstetric care and COVID-19. The project was replicated to 10 cities in Brazil.

Conclusion: The creation of “Talk to the Midwife Recife - PE” made it possible to offer a telenursing service with welcome and security to promote maternal health in times of COVID-19 pandemic.

Resumo

Objetivo: Descrever o processo de criação do Fale com a Parteira Recife – PE como um serviço de telenfermagem utilizando o WhatsApp® como ferramenta de apoio para promoção da saúde materna na pandemia da COVID-19.

Método: Estudo tipo relato de experiência. A criação do “Fale com a Parteira Recife – PE” seguiu as recomendações do Instituto de Medicina e Comitê de Qualidade da Assistência à Saúde da América em relação a prestação de cuidados a saúde. Trabalho remoto e virtual com construção de um layout para WhatsApp® e um termo de consentimento livre e informado para autorizar a teleorientação. Os dados eram armazenados em registros eletrônicos. Os critérios de seleção para compor a equipe de enfermeiras obstétricas foram estar disponível e atuar voluntariamente, residir na região metropolitana de Recife-PE e ter experiência na enfermagem obstétrica. As atividades iniciaram em 19 de março de 2020.

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Conflicts of interest: nothing to declare.

Resultados: No total, 56 enfermeiras obstétricas atuaram nas teleorientações. Em três meses, 2.300 usuárias receberam teleorientações com tempo médio de 20 minutos, 43% estavam no terceiro trimestre de gestação, 21% no segundo e 13% no primeiro trimestre, 7% eram puérperas. Para apoiar as teleorientações foram construídas mensagens instantâneas de acordo com as necessidades das gestantes e puerperas e um protocolo sobre assistência obstétrica e COVID-19. O projeto foi replicado para 10 cidades do Brasil.

Conclusão: A criação do “Fale com a Parteira Recife – PE” possibilitou oferecer um serviço de telenfermagem com acolhimento e segurança para promoção da saúde materna em tempos de pandemia da COVID-19.

Resumen

Objetivo: Describir el proceso de creación de “Fale com a Parteira Recife – PE” (Habla con la Partera Recife – PE) como un servicio de teleenfermería utilizando el WhatsApp® como herramienta de apoyo para la promoción de la salud materna durante la pandemia de COVID-19.

Método: Estudio tipo relato de experiencia. La creación de “Fale com a Parteira Recife – PE” siguió las recomendaciones del Instituto de Medicina y Comité de Calidad de la Atención a la Salud de América con relación a la prestación de cuidados a la salud. Trabajo remoto y virtual, con construcción de un diseño para WhatsApp® y un término de consentimiento libre e informado para autorizar las telerecomendaciones. Los datos fueron almacenados en registros electrónicos. Los criterios de selección para formar parte del equipo de enfermeras obstétricas fueron: estar disponible y participar voluntariamente, residir en la región metropolitana de Recife, estado de Pernambuco y tener experiencia en enfermería obstétrica. Las actividades comenzaron el 19 de marzo de 2020.

Resultados: En total, 56 enfermeras obstétricas participaron en las telerecomendaciones. En tres meses, 2300 usuarias recibieron telerecomendaciones de un tiempo promedio de 20 minutos, el 43 % estaba en el tercer trimestre de gestación, el 21 % en el segundo y el 13 % en el primer trimestre, el 7 % eran puérperas. Para respaldar las telerecomendaciones, se elaboraron mensajes instantáneos de acuerdo con las necesidades de las mujeres embarazadas y puérperas y un protocolo sobre atención obstétrica y COVID-19. El proyecto fue replicado en diez ciudades de Brasil.

Conclusión: La creación de “Fale com a Parteira Recife – PE” permitió ofrecer un servicio de teleenfermería de acogida y seguridad para la promoción de la salud materna en tiempos de pandemia de COVID-19.

Introduction

COVID-19 is an infection caused by the coronavirus identified as SARS-CoV-2, first seen in December 2019 in Hubei Province in China. Between December 31, 2019 and January 3, 2020, 44 cases were identified. On March 11, 2020, the COVID-19 pandemic was decreed by the World Health Organization. Faced with this new scenario, several uncertainties about COVID-19 in pregnancy emerged. Infection control measures for pregnant women were recommended, such as universal testing, assessment of fever, signs of respiratory infection and telephone screening.⁽¹⁾

Studies indicate that pregnant women at any gestational age and postpartum, have favorable conditions for complications of COVID-19, possibly due to the relative immunodeficiency associated with physiological adaptations and organic responses to viral infections in this period.⁽²⁾ In Brazil, there was a high maternal mortality rate by COVID-19 between February 26 and June 18, 2020, 978 positive cases were recorded resulting in 124 deaths, of these, 9.8% in pregnant women and 22.3% after birth.⁽³⁾

Risks must not be overcome and pregnant women need to be advised to prevent infection in pregnancy.⁽²⁾ Social distance and remote con-

tact for obstetric assessments and identification of COVID -19 signs were recommended by scholars and international health agencies as protective measures, avoiding unnecessary travel during pregnancy and the puerperium to health units at the time of pandemic.^(1,4)

The challenges imposed in the face of the complexity of the pandemic, reaffirm the need that all women have the right to receive qualified care and that the integrality and humanization of care is guaranteed. Nurse-midwives and other health professionals must recognize the impact of the pandemic on women's health and contribute to ensuring that their needs are met.⁽⁵⁾

The use of technologies has been effective in increasing the scope of health care with management, assistance, teaching and research actions, being recommended to expand the offer of services related to health care. In a broad sense, telemedicine has been seen as an important tool to face the contemporary challenges of health systems.⁽⁶⁾

The International Council of Nurses addresses telemedicine in nursing using the term telenursing, pointing out good results in the monitoring and communication between nurse-patient, considering their needs and expectations. We recommend the use of technologies that better adapt to the daily lives of patients and the practice of telenursing using

tools such as e-mail and text and audio messages.⁽⁷⁾ Nursing is responsible for developing skills in the use of technologies and ensuring the safe, effective and competent provision of health care with team and family-centered and patient-centered approaches.⁽⁸⁾

Analyzing studies on digital technologies, the effectiveness and potential of using WhatsApp® in different clinics and contexts was highlighted.⁽⁹⁻¹¹⁾ Follow-up in the care of people with HIV promoted access to health professionals by providing an open and immediate way of communication to overcome difficulties.⁽⁹⁾ In support of breastfeeding with health education actions, collaborated in subjects' autonomy and responsibility in relation to self-care.⁽¹⁰⁾ Systematic review results indicate that WhatsApp® is an effective communication tool for telemedicine and reinforce the need to develop studies with better methodological descriptions and execution process. The authors consider that the evidence is convincing for the application to be a resource for health care to be used between professionals and users.⁽¹¹⁾

Considering the evidence on the use of WhatsApp® as an assistance tool in several settings, this study aimed to describe the process of creating "Talk to the Midwife Recife - PE" (*Fale com a Parteira Recife - PE*), a telenursing service using WhatsApp® as a support tool for promotion of maternal health in the COVID-19 pandemic.

Methods

This is an experience report on the process of creating the "Talk to the Midwife Recife - PE". The trajectory started on March 19, 2020 when a group of nurse-midwives met remotely to think of a care strategy for pregnant women and mothers in the COVID-19 pandemic. With the social isolation imposed on the population by the local government, the initiative of a telenursing service by WhatsApp®, in the modality of teleguidance, for free, on pregnancy, childbirth, the puerperium and COVID-19 has emerged.

In the first moment of creation, the recommendations of the Institute of Medicine and the Health

Care Quality Committee of America were considered regarding the provision of health care regarding the central role of technology in the redesign of the health system to achieve better results. Six strategies are part of the recommendations as follows: 1) **effectiveness**: ensuring that care is based on evidence with proven effectiveness. 2) **efficiency**: minimize the waste of resources. 3) **safety**: preventing damage to health care. 4) **timely**: avoid delays in care. 5) **patient-centered**: meeting needs. 6) **equitable**: no variation in quality of care.⁽¹²⁾

Then, a layout for WhatsApp® and Instagram® was developed. In the Instagram® biography, a link was set that directed to assistance in a WhatsApp® group. In the Instagram® profile, "posts" about pregnancy, childbirth, the puerperium and COVID-19 were built and published. The publications were based on national and international scientific recommendations. Disclosures in the local media were made, based on the radio, television and newspapers programs of the city, in order that more pregnant women and puerperal women had access to "Talk to the Midwife Recife - PE".

In the second moment, there was the teleguidance team composition, based on telephone contact with nurse-midwives with availability to act voluntarily, reside in Recife/PE and/or metropolitan region and experience in nursing-midwifery. All were trained remotely for teleguidance. A 24-hour stopover was planned according to the availability of each professional.

To support teleguidance, a protocol for obstetric care and COVID-19 was drawn up based on the main scientific evidence, guidelines from the Ministry of Health, International Federation of Gynecology and Obstetrics and Royal College of Obstetricians and Gynaecologists.

In the third moment, a teleguidance flow was organized from the access of a WhatsApp® link, guiding those who wished to attend to leave a message "I need help". A nurse-midwife picked up the phone number and in the private contact sent a welcoming message and requested the reading and filling out the Informed Consent Form. After the consent, another message was sent, this time, requesting information to support teleguidance: if

they are pregnant or puerperal women, gestational age or puerperium time, known classification of low- or high-risk prenatal care, city of residence and their question.

To record the teleguidance, a digital script was made available with woman's name, age, telephone number, date, start and end time of teleguidance, obstetric situation, referred gestational age, presence of prenatal consultation, reason for teleguidance, guidelines provided with name and COREN responsible for the call center. An Informed Consent Form was attached to the digital script. The responsibility for storing information was with the team responsible for the project.

During the teleguidance's course, the team realized the need to expand strategies to support communication. From the most frequent doubts, instant messages were built according to good obstetric practices, written in a clear manner, simple language and illustrations with emojis. The contents of the messages were evaluated by obstetrics clinics from "Talk to the Midwife - PE" until its final version.

During the "Talk to the Midwife Recife - PE" trajectory and the expansion of call center services, there was a need to rethink strategies to ensure safety and quality of care. Thus, the team of nurse-midwives shared, in a virtual group, doubts and decision-making. The authors of this article were also volunteers of the project and had the experience of a collective work with contributions to the promotion of maternal health in the COVID-19 pandemic times.

The research was submitted to CONEP, according to resolution 466/12 and 510/16 of the Brazilian National Research Council (*Conselho Nacional de Saúde*) and approved on May 27, 2020, with a substantiated opinion 30713420.4.0000.5208. For information collection, the period from 3/21/2020 to 6/18/2020 was considered.

Results

During the implementation of "Talk to the Midwife Recife - PE", 56 nurse-midwives contributed to the

call centers. Most had three months in the project (78.9%) and aged between 20 and 30 years. The time of training in obstetrics was from one to 10 years (68.5%) and 78.9% worked in institutions of the Unified Health System (*Sistema Único de Saúde* - SUS). With respect to pregnant women, the age ranged from 19 to 29 years, 43% were in the third trimester of pregnancy, 21% in the second trimester, 13% in the first trimester, 7% were puerperal and 15% ignored information or did not know how to inform. In the three-month period, 2,300 users accessed teleguidance one or more times, most of accesses were during the day.

Figure 1 shows the layout for creating the group name. To the left there is the illustration of a WhatsApp® group profile and to the right, the Instagram® social network.



Figure 1. "Talk to a Midwife" creation layout

To provide logistical support, 21 nursing students and six nurse-midwives were responsible for moderating a WhatsApp® group by sending messages about the purpose of the call center and controlling the entry and exit of people who accessed the "Talk to the Midwife Recife - PE" (Figure 2).

During teleguidance, prenatal card and test results pictures were requested to direct guidance. At the end, a closing message was sent by the obstetric ward responsible for teleguidance. In case of other doubts, a new access should be made through a WhatsApp® link (Figure 3).

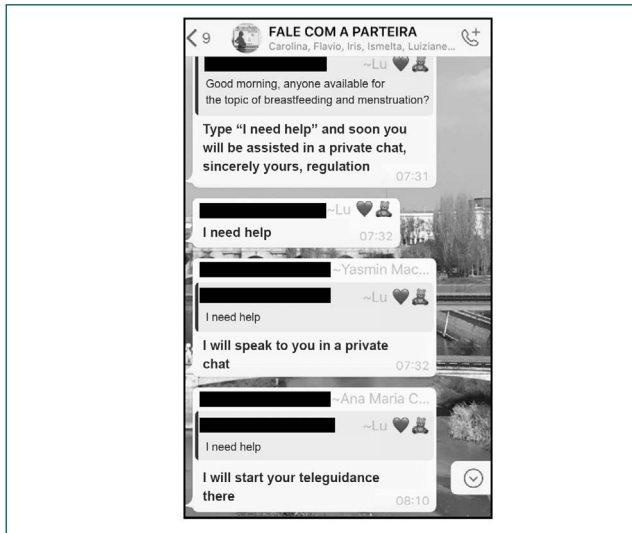


Figure 2. Teleguidance with a moderation team and midwife approach

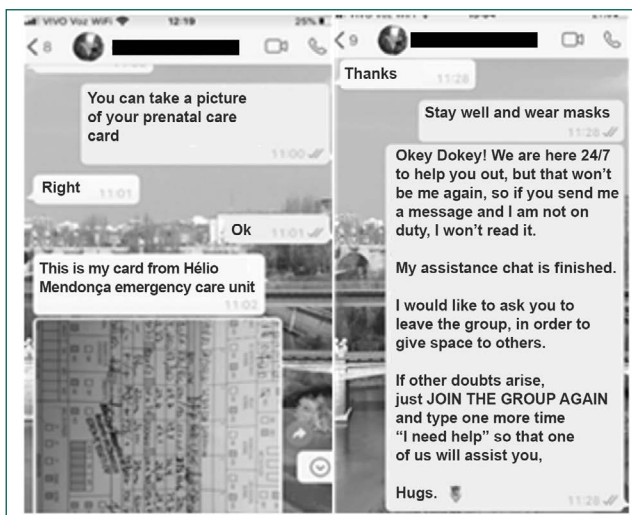


Figure 3. Teleguidance with picture of prenatal card (left) and closing message (right)

The average time for teleguidance was 20 minutes, using a text message and/or voice. 95% of calls were not urgent. The main doubts were about nausea and vomiting, uterine contractions, length of pregnancy, labor, mucous plug, fetal movement, high blood pressure, presence of the companion due to a pandemic, labor doubts, vaginal discharge, break of water bag, fear of pandemic, signs and symptoms of COVID-19.

In the first month of creation of “Talk to the Midwife Recife-PE”, several women’s reports drew the attention of several women about the lack of ac-

cess and/or discontinuity of prenatal consultations due to the pandemic of COVID-19, whether in SUS or in the private service. This fact is evidenced in the following excerpts: “I’m super worried because I have VDRL and prenatal care has stopped and the doctor can’t see my exams or my first ultrasound. What do I do? “I don’t have a health plan and the health agent hasn’t arrived yet because of the pandemic”. “I am 11 weeks old and the appointment was canceled because of the virus”. “My city does not have a doctor, or a private doctor, and I am pregnant with my second child, feeling pain in my belly and a yellow discharge”. “I am 37 weeks old and there are no appointments at the stations here and I wanted to know if it is necessary to have an ultrasound”.

Considering the reports, a dossier was prepared and delivered to the Department of Health of Pernambuco State, with the aim of alerting managers about the lack or discontinuity of prenatal care and the impact on pregnant women’s health. Moreover, a network was created with the Regional and Federal Nursing Council, Public Universities, Organized Civil Society, Maternal Mortality Committee, State and Municipal Health Departments. However, an articulation was made with psychology and dentistry professionals, in case the pregnant women and puerperal women presented such demands.

During teleguidance, the pregnant women and the puerperal women sent messages expressing the feeling of satisfaction with the care received, see some reports: “It was perfect, because it was my first pregnancy, so I had a lot of doubts”. “I loved it, very well assisted twice, excellence in professionalism”. “It was great, even though it was my second pregnancy I had doubts and you guys helped me a lot”. “I really liked it, the two times I was guided, the people who assisted me were very attentive”. “It helped since I was in early pregnancy and without starting prenatal care”. “Response and guidance with quick feedback and scientific background. Super competent”. “Great, it helped me with everything from pregnancy to delivery”. “Excellent and very important to me. Until after I had my baby, you help me when doubts arose”.

The project was sent to the Federal Nursing Council, which highlighted the social relevance.

In the expansion path, the “Talk to the Midwife” was replicated to Salvador/BA, Feira de Santana/BA and Itabuna/BA, João Pessoa/PB and Campina Grande/PB, Maceió/AL, Manaus/AM, Curitiba/PR, Dourados/MS and Caruaru/PE. There were more than 2,360 call centers in these locations.

Discussion

“Talk to the Midwife Recife - PE” used WhatsApp® as an information and communication technology for pregnant women and puerperal women during the COVID-19 pandemic. WhatsApp® is recognized by authors as a tool of possibilities for mutual, creative and open interaction. In a study that analyzed 259 users, it found that 177 were using WhatsApp®, where 112 were women and 87% stated that social media is a form of interaction.⁽¹³⁾ In the southern United States, 83% of pregnant women were willing to participate in perinatal interventions with internet support via computer. The authors conclude that the development of computer-based or cell phone-based approaches to providing clinical information and educational interventions can contribute to positive implications for prenatal care.⁽¹⁴⁾

The creation of a telenursing service with WhatsApp® support in times of a pandemic, made it possible to promote the health of a population vulnerable to the complications of COVID -19. From the remote access, it was possible, in three months, to carry out 2,300 call centers for pregnant women and puerperal women. The average time was 20 minutes and 95% of calls were not urgent. A study conducted by doctors in Bangladesh, South Asia, on maternal, newborn and child health through mobile phone consultations found that 53% were pregnant women who asked for advice on various aspects of pregnancy, childbirth and the postpartum period; 96% of calls were not urgent. The authors report the satisfaction of women and their partners with remote care.⁽¹⁵⁾

In this study, the use of instant messages built from the main doubts that arose in the call center facilitated communication during teleguidance. Authors consider that clear and objective telephone

messages are relevant for health promotion and when validated they can be replicated in other research.⁽¹⁶⁾

The creation of “Talk to the Midwife Recife - PE” with the initial idea of improving the experience of pregnant women and puerperal women in times of pandemic of COVID -19 had the care of nurse-midwives humanized care and based on scientific evidence. The project’s initiative received the seal of the Brazilian National Women’s Health Commission recognizing it as good practice for greater safety for women in the pandemic.⁽¹⁷⁾

The strategy of using WhatsApp® can be extended to health teams, communities, students and teachers, promoting teaching-service-community integration, expanding the possibilities of empowerment, co-responsibility and autonomy for comprehensive, equitable and accessible health care. As positive points, the authors highlight the dynamism, ease of interaction, fluidity the dialogue and compliance of the people involved.⁽¹⁸⁾

In India, neurosurgeons used the tool for discussions, sending images and referring patients with informed verbal consent. The authors highlight the advantages of WhatsApp®: fast communication, real-time opinions and the team does not need to be in the hospital to provide information. The disadvantage would be the constant availability of internet connection.⁽¹⁹⁾ Oral and maxillofacial surgeons in the United States, reaffirm that the use of WhatsApp® improves communication, 1,747 messages were accessed and 64.4% of cases were resolved only by the application.⁽²⁰⁾ In Israel, a team of 88 neonatology and pediatricians used the app to improve their professional experience and reinforce the importance of ethical guidelines and patient rights for use in clinical settings.⁽²¹⁾

The strong point of the creation of “Talk to the Midwife Recife - PE” was the use of recommendations from a theoretical framework.⁽¹²⁾ In the sense of **effectiveness**: it ensured that teleguidance was based on scientific evidence and national and international protocols; of **safety**: when it aimed at preventing damage to maternal health through teleguidance to promote self-care; of **timely service**: when seeking to avoid delays in care by articulating with the obstetric care network, reinforcing the referral of women to

the health service in their region and seeking support from psychology and dentistry and **patient-centered services**: providing teleguidance according to needs of pregnant women and women who have recently given birth. However, future studies using WhatsApp® as a support tool in promoting the health of pregnant women and women who have recently given birth may give rise to new adaptations.

Conclusion

The “Talk to the Midwife Recife-PE” was created according to international recommendations for the provision of care and the use of information technology. Efforts were made to improve implementation and decision making, such as training nurse-midwives, building protocol, creation of instant messages to support communication, layout for social networks, flow of guidelines, digital script and Informed Consent Form. The service brought contributions to the nursing-midwifery workforce with a view to securing maternal health, overcoming geographical barriers. A window of opportunity can be considered in the advanced practice of health promotion with the use of a technological strategy used to offer support, monitoring and safe reception to pregnant women and puerperal women in COVID-19 pandemic times. Other types of studies are recommended to assess the effects of interventions using WhatsApp® on obstetrics.

Collaborations

Oliveira SC, Costa DGL, Cintra AMA, Freitas MP, Jordão CN, Barros JFS, Lins RLBS and Frank TC contributed to the study design, data analysis and interpretation, writing of the article, relevant critical review of intellectual content and version approval final to be published.

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