Remote health care in the context of the pandemic: Integrative review

RESUMO | Objetivo: Identificar na literatura como se configurou, durante a pandemia, o teleatendimento pelos profissionais da saúde, quais ferramentas foram utilizadas; e o nível de evidência dos estudos publicados. Método: Revisão integrativa da literatura com busca realizada em janeiro de 2021, delimitando os últimos 5 anos, nas bases de dados: Cinahl, Cochrane, Lilacs, Scopus, PubMed, Web of Science e Embase. Resultados: Total de 912 títulos; 13 artigos incluídos. Os profissionais que utilizam a teleconsulta foram médicos, enfermeiros e fisioterapeutas. Os meios e ferramentas utilizados foram videochamadas; ligações telefônicas; e-mail, Zoom e Skype, iMessage e aplicativos como R-MAPP. Conclusão: a telemedicina foi um importante meio de educação em saúde e continuidade de tratamento; as áreas e profissões que utilizaram o teleatendimento e teleconsulta incluíram a equipe de saúde de um modo geral.
Descritores: COVID-19; Pandemia; Profissões da Saúde; Telemedicina; Telemonitoramento

ABSTRACT | Objective: To identify in the literature how telecare and teleconsultation by health professionals were configured during the pandemic, which tools were used; and the level of evidence of published studies. Method: Integrative literature review with a search carried out in January 2021, delimiting the last 5 years, in the following databases: Cinahl, Cochrane, Lilacs, Scopus, PubMed, Web of Science and Embase. Results: Total of 912 titles; 13 articles included. The professionals who use teleconsultation were doctors, nurses and physiotherapists. The means and tools used were video calls; phone calls; email, Zoom and Skype; iMessage and apps like R-MAPP. Conclusion: telemedicine was an important means of health education and continuity of treatment; the areas and professions that used teleservice and teleconsultation included the health team in general.
Keywords: COVI-19; Pandemics; Health Care Professional; Telemedicine; Telemonitoring

RESUMEN | Objetivo: Identificar en la literatura cómo, durante la pandemia, se configuró el teleservicio por parte de los profesionales de la salud, qué herramientas se utilizaron; y el nivel de evidencia de los estudios publicados. Método: Revisión integrativa de la literatura con búsqueda realizada en enero de 2021, delimitando los últimos 5 años, en las siguientes bases de datos: Cinahl, Cochrane, Lilacs, Scopus, PubMed, Web of Science y Embase. Resultados: Total de 912 títulos; 13 artículos incluidos. Los profesionales que utilizaron la teleconsulta fueron médicos, enfermeras y fisioterapeutas. Los medios y herramientas utilizados fueron las video llamadas, llamadas telefónicas; correo electrónico, Zoom y Skype; iMessage y aplicaciones como R-MAPP. Conclusión: la telemedicina fue un importante medio de educación en salud y continuidad del tratamiento; las áreas y profesiones que utilizaron el teleservicio y la teleconsulta incluyeron al equipo de salud en general.
Palabras claves: COVID-19; Pandemia; Profesionales de la salud; telemedicina; telemontoreo

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INTRODUCTION

It is known that telemedicine has been used for more than 20 years in health services. The context of the Covid-19 pandemic, caused by the new coronavirus, brought the need for approaches to health monitoring and assistance. It is known that comprehensive care for people infected with Covid-19 must involve multidisciplinary treatment. Preventive measures are essential for the successful control of the pandemic and, in this case, multidisciplinary care is a priority. The Ministry of Health published Ordinance No. 467, recognizing the use of Telemedicine for consultations,
pre-clinical care, care support, diagnosis and monitoring. Thus, each council in the professional health area establishes legal and ethical standards for virtual consultations.

For Nursing, according to COFEN Resolution No. 643/2020, nursing teleconsultation was authorized as a way of combating the pandemic through consultations, clarifications, referrals and guidelines. It should be noted that the purposes of using telemedicine during the pandemic were to maintain distance service and avoid agglomerations in health services.

The possibility of remotely carrying out assistance, guidance and health education is a new, necessary and highly motivating perspective in the current pandemic scenario. In addition, financially it has a lower cost, which allows service without time and day restrictions, time optimization, especially in large urban centers.

In the health area, virtual tools became essential for maintaining guidelines on the new disease, as well as monitoring patients who needed periodic control, due to chronic diseases, psychological treatments, etc.

Thus, the research question arose “How was teleservice by health professionals configured during the pandemic, and what tools were used?”.

METHOD

This is an integrative literature review, defined as an instrument for obtaining, identifying, analyzing and synthesizing publications on a specific topic.

This integrative review followed the methodological rigors, according to four steps, which are described below:

- 1st phase: elaboration of the guiding question from the PICO strategy.
- 2nd phase: articles were related according to literature search;
- 3rd phase: analysis of titles and abstracts to verify answers to the guiding question;
- 4th phase: the articles included were analyzed in detail.

Based on the PICO strategy, the following guiding question was formulated for the review: “How was teleservice by health professionals configured during the pandemic, and what tools were used?”.

The search was carried out in January 2021, with a period referring to the last 5 years, in the following databases: CINAHL, Cochrane, LILACS, Scopus, PubMed, Web of Science and Embase. DECS and MESH descriptors were used. The inclusion criteria were: articles published between 2016 and 2021, with open access and in full, and that answered the guiding question of the review.

To analyze the articles, the instruments Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) were used for quantitative studies, Consolidated Criteria for Reporting Qualitative Research (COREQ) for qualitative studies, and PRISMA for systematic reviews.

The articles included were read in full.

Figure 1. Article selection flowchart. Botucatu, 2021.
<table>
<thead>
<tr>
<th>Title/Year/Country/Base</th>
<th>Type of study</th>
<th>Objectives</th>
<th>Results</th>
<th>Evidence</th>
<th>Score</th>
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<tbody>
<tr>
<td>&quot;A simple remote nutritional screening tool and practical guidance for nutritional care in primary practice during the Covid-19 pandemic&quot; (23) - 2020 - Croatia - Cinahl</td>
<td>Experts' opinion</td>
<td>Propose a tool for nutritional screening.</td>
<td>A nutritional screening tool was developed as a pragmatic measure to be used in primary practice as part of telemedicine.</td>
<td>VII</td>
<td>Does not apply</td>
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<tr>
<td>&quot;The Influence of Telehealth for Better Health Across Communities&quot; (24) - 2020 - USA - Cinahl</td>
<td>Experts' opinion</td>
<td>Describe the multifacted approach to a rapid response to the Covid-19 pandemic along with technology applications.</td>
<td>Implementing nurses to triage callers reporting respiratory symptoms reduced the number of in-person visits to the clinic.</td>
<td>VII</td>
<td>Does not apply</td>
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<tr>
<td>&quot;Telehealth Opportunities for the Otolaryngologist: A Silver Lining During the Covid-19 Pandemic&quot; (25) - 2020 - USA - Cinahl</td>
<td>Experts' opinion</td>
<td>Show how was the experience with the adoption of telehealth.</td>
<td>The experience was positive and, with telemedicine, it was possible to provide care in areas of difficult access.</td>
<td>VII</td>
<td>Does not apply</td>
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<tr>
<td>&quot;Redesigning Portable Health Clinic Platform as a Remote Healthcare System to Tackle Covid-19 Pandemic Situation in Unreached Communities&quot; (26) - 2020 - Cinahl</td>
<td>Experts' opinion</td>
<td>Redesign a platform that could effectively meet needs in this context of the pandemic.</td>
<td>A portable clinic system was developed, which could assist patients with non-communicable diseases.</td>
<td>VII</td>
<td>Does not apply</td>
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<td>&quot;Use of telemedicine in obstetrics and gynecology in Zimbabwe during a lockdown period&quot; (27/28) - 2020 - Zimbabwe - Scopus</td>
<td>Descriptive Study</td>
<td>To determine the effectiveness and acceptability of telemedicine in obstetrics and gynecology during this period.</td>
<td>Telemedicine was introduced by gynecologists and obstetricians, of the 109 women treated, 67 consented to be assisted by telemedicine.</td>
<td>VI</td>
<td>STROBE/14 points</td>
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<tr>
<td>&quot;Use and perception of telemedicine in people with type 1 diabetes during the Covid-19 pandemic—Results of a global survey&quot; (29) - 2020 - EUA - Scopus</td>
<td>Qualitative Study</td>
<td>Gather real-time information on the use and perception of telemedicine in people living with type 1 diabetes.</td>
<td>86% found remote appointments useful and 75% plan to have remote appointments in the future.</td>
<td>VI</td>
<td>COREQ/17 points</td>
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<tr>
<td>&quot;Teledentistry from a patient perspective during the coronavirus pandemic&quot; (30) - 2020 - United Kingdom - Web of Science</td>
<td>Qualitative Study</td>
<td>Identify 5 domains: patient satisfaction; ease of use; increased access to services; reliability; and usefulness to patients.</td>
<td>The vast majority of respondents agreed or strongly agreed to be able to express themselves to their physician as if they knew each other personally.</td>
<td>VI</td>
<td>COREQ/22 points</td>
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<tr>
<td>Title</td>
<td>Type</td>
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<td>“Communication tools in the COVID-19 era and beyond which can optimize professional practice and patient care”</td>
<td>Experts’ opinion</td>
<td>Summarize the variety of health communication platforms and tools available.</td>
<td>Several software applications have enabled the safe application of telemedicine in outpatient clinics.</td>
<td>III</td>
<td>Does not apply</td>
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<td>- United Kingdom</td>
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<td>“Health care providers’ perceptions of quality, acceptance, and satisfaction with telebehavioral health services during the Covid-19 pandemic: Survey-based study”</td>
<td>Descriptive Study</td>
<td>To determine the initial perceptions and experiences of health professionals regarding the change in face-to-face care.</td>
<td>A total of 170 people were interviewed, 93.5% were nurses, therapists and psychiatrists. They reported being adapted to remote service.</td>
<td>VI</td>
<td>STROBE/10 points</td>
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<td>“A multidisciplinary telemedicine model for management of coronavirus disease 2019 (Covid-19) in obstetrical patients”</td>
<td>Descriptive Study</td>
<td>Define the feasibility, clinical and process outcomes associated with telemedicine for obstetric patients with symptoms of Covid-19.</td>
<td>135 patients used telecare. Doctors and nurses were able to proceed with monitoring remotely.</td>
<td>VI</td>
<td>STROBE/13 points</td>
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<td>“Incorporating Video Visits into Ophthalmology Practice: A Retrospective Analysis and Patient Survey to Assess Initial Experiences and Patient Acceptability at an Academic”</td>
<td>Descriptive Study</td>
<td>Evaluate the implementation and patient acceptability of video call to care for eye care..</td>
<td>Virtual tours can be used to manage a variety of eye complaints. According to patients, these video visits save time.</td>
<td>VI</td>
<td>STROBE/15 points</td>
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<td>“Pharmacist intervention amid the coronavirus disease 2019 (Covid-19) pandemic: From direct patient care to telemedicine”</td>
<td>Experts’ opinion</td>
<td>Report the experience of pharmaceutical intervention during the pandemic.</td>
<td>By phone, pharmacists were able to educate patients about the symptoms of Covid-19, in addition to clarifying other doubts.</td>
<td>VII</td>
<td>Does not apply</td>
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<td>“Teledermatology in the times of Covid-19 – a systematic review”</td>
<td>Systematic review of qualitative or descriptive studies</td>
<td>Register all publications in the international literature on the use of teledermatological methods in the Covid-19 pandemic.</td>
<td>It showed that dermatologists sought ways to keep track of patients amid the pandemic.</td>
<td>V</td>
<td>PRISMA/9 points</td>
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Source: prepared by the authors, 2021.

and the corresponding findings were compiled in the form of a synthesis of knowledge.

**RESULTS**

From the search in the databases, 912 titles were identified and, after analysis, 13 articles were included. The flowchart (Figure 1) demonstrates this result. The synthesis of knowledge was prepared according to the full reading of the 13 articles included, the level of evidence was identified and a detailed analysis of the contents was performed (Chart 3).

**DISCUSSION**

The synthesis of knowledge from the 13 articles analyzed had a common feature: adherence to teleservice due to the emer-
ging need for social distancing and health recommendations to combat Covid-19.

Level of evidence of included articles
The articles were subjected to a thorough analysis to verify the levels of evidence, so it was possible to identify that 6 articles are of level of evidence II [23,24,26,29,31,32], representing expert opinion and/or case report, six articles of evidence level VI, for being a qualitative or descriptive study, where 2 are qualitative research [28,29] and four descriptive studies. [27,31-33] And finally, one with level of evidence V, as it is a systematic review of qualitative or descriptive studies. [33]

Professionals who used teleconsultation
The adherence to teleservice by health professionals was a consequence of the search to meet the recommendations proposed by governmental organizations. In the study by Shipchandler et al. (2020), taking advantage of telehealth is beneficial because in addition to complying with the protocols to contain the spread of Covid-19, it allows rural residents to have access to the care of surgical specialties that used this resource, among them: orthopedics, otolaryngology, head and neck surgery, general surgery, neurosurgery, urology and plastic surgery. Thus, geographic barriers were broken, it provided an easy and economy to access the service, in addition to not having to travel to the consultation. [25] However, otolaryngologists report that remote care should not be used definitively or be the only form of care in the future, this is due to the limitations to perform physical examinations and/or procedures that require a contribution of devices. [25-33]

In Zimbabwe, despite the lockdown measures to contain the disease, they proposed strategies so that the population would not be left without access to health services. Therefore, gynecologists and obstetricians evaluated the cases of 109 women remotely and later gave their conduct, which is very positive to continue monitoring women’s health. [27]

In Massachusetts, the maternal and neonatal center proposes to offer prenatal and puerperal follow-up through teleservice. Follow-ups were carried out, and in urgent cases, the user was referred for face-to-face evaluation. [32] Teledermatology has also developed strategies to follow up on patients’ treatments, through the awareness and relevance of periodic maintenance of related problems, which directly implies the final result of the clinical condition presented by the user. [35]

In the research by Elbeddini et al. (2020), pharmacists optimized teleservice interventions for patients with chronic diseases. Relevant actions were taken to control symptoms, clarify about Covid-19 and follow up on the monitoring of chronic diseases, in addition to clarifying the use of medicines. [34] In the integrated health system located in Florida, it submitted 170 workers to an interview, in which 84.5% stated that they had been using telehealth for a year, via phone calls or videos. [30,31]

Tools used in teleconsultation
In Italy, the study by Krsnak et al. (2020) showed that despite the impossibility of conducting face-to-face consultations, it was necessary to maintain the follow-up of patients, in primary care, both for recent diagnosis with malnutrition or nutritional imbalances caused by other diseases. [22] These patients with nutritional needs needed to be followed up and had an up-to-date prescription of nutritional therapy. [23] Thus, to identify nutritional risk, loss of muscle mass and function, an application was created, called Remote Malnutrition APP (R-MAPP), to be used by family doctors remotely. [24]

In the research by Sampa et al. (2020), in the United States, a system focused on communicable diseases was developed. Data collection at home was performed by a health professional, who later stored the data in the Health Client application and a medical professional with access to this database, analyzed the collected data and, thus, held a video call with the

In the health area, virtual tools became essential for maintaining guidelines on the new disease, as well as monitoring patients who needed periodic control, due to chronic diseases, psychological treatments, etc.
patient. In this way, telemedicine was valued in this pandemic period and it is believed that it will remain strongly linked to the area of health education. The post-Covid period will also be impacted by its use, at least for initial care and guidance on what to do, where to seek care due to the sequelae that remained in patients who suffered so much from this new disease.

CONCLUSION

Regarding the objectives, it was possible to identify that predominantly experience reports were the most frequent, with six articles; followed by six articles with level of evidence VI and one study with level of evidence V.

Scientific evidence related to the use of teleservice by health professionals has shown to be active and efficient in several areas and specialties. The option of the service modality, as well as the use of platforms and tools used, proved to be available and with professional responsibility due to the concern in containing the spread of the Covid-19 virus.

References


