



## Wounds Care on Patients During The Covid-19 Pandemic Era

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### Abstract

Wound care is part of nursing management. During Covid-19, the practice of wound care decreased under normal conditions. Nursing management knowledge is needed on how to practice wound care during COVID-19 to provide a wound healing process. This systematic review aims to identify wound care nursing care management during COVID-19. Methods: Article searched from PubMed; ProQuest; and EBSCO; selected based on the following inclusion criteria: study focus on nurses practicing chronic wound care during Covid-19, focused nursing management, case studies, articles published in the 2019-2021 range, full text, articles in English. Results: In the final stage, 5 articles were found. The results of the study show that nursing care management uses telehealth and telemedicine services for wound care patients. Conclusion: The findings of this systematic review indicate that telehealth and telemedicine services can provide opportunities to improve wound care to patients.

### Keywords

nursing management;  
wound care; Covid-19

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## Introduction

One of the threats of COVID-19 in the world is the disruption of wound care practices, especially chronic wounds. In March 2020, the surgeon general urged all healthcare facilities across the US to stop elective procedures and suspend all non-essential treatment. This is a way to prevent transmission of the corona virus and prevent the number of people in the hospital. Furthermore, patients with various medical comorbidities require disciplinary consultation from health workers, such as diabetes control, which is not as frequent as during the COVID-19 pandemic. Of course, given the difficulty of carefully observing and actually treating wounds during the COVID-19 pandemic, wound care specialists quickly devised new treatment models to ensure the continued success of managing vulnerable outpatients, as well as managing patients with pressure ulcers (Waller, 2020). Chronic wounds are generally described as barrier deficiencies that have not healed the wound for up to three months (Kyaw et al., 2018).

Chronic wounds are wounds in which the normal healing process has been restricted at one or more points in the hemostatic, inflammatory, proliferative, and remodeling phases. In this type of wound, there is generally an underlying pathology, which results in slow healing (Leveriza & Phillips, 2005). Chronic wounds include diabetic foot ulcers, venous leg ulcers, and pressure ulcers. Chronic wounds are a challenge for wound care professionals and consume a lot of health resources around the world (Frykberg, 2015). It affects millions of patients worldwide, placing a great deal of responsibility on health resources in performing wound care (Li et al., 2020). In the United States, chronic wounds affect more than 6 million people, with more being anticipated due to an aging population and the high prevalence of patients with diabetes mellitus (Powers et al., 2016).

Chronic complex wounds are a primary health problem, with serious repercussions for the people affected, the care environment and the health care system. Approaching them requires an integrated system of care where the complete course of the discus counts for greater effectiveness (Jiménez-García, 2019). Effective chronic wound management is complex, and to maximize outcomes for patients, it is recommended that those involved in care and treatment should have the appropriate knowledge and skills (Welsh, 2018).

The spread of the coronavirus has severely impacted medical practice behavior, resulting in a reduction in required medical care, including specialization in wound healing. The COVID-19 pandemic has limited the ability of wounds to heal under normal conditions. Patients with vascular foot ulcers are a highly vulnerable population, with a poor quality of life caused by pain that is directly related to ulcer duration and ulcer size. If ischemic wounds and veins are not treated or managed, the consequences can be drastic, such as infection, sepsis, amputation, or even death (Tinelli et al., 2020). World wound care is experiencing greater disruption causing the need for wound evaluation (Waller et al., 2020).

In this systematic review, an overview will be given of nursing management in carrying out wound care during the corona virus disease. The aim of this systematic review was to evaluate 14 nursing management procedures for treating wounds in patients with chronic wounds during COVID-19.

## **Methods**

### **Search Strategy**

Searching for articles in this systematic review uses an international electronic database consisting of EBSCO, ProQuest, and PubMed with years of publication from 2019-2021, and articles in English and full text. The search strategy carried out in this systematic review uses several keywords used in the search in the database used. Keywords refer to Medical Subject Heading (MeSH). The search terms used were: nursing care, nursing management, wound, COVID-19, Corona Virus Disease 2019. The following search strategies were used: nursing care OR nursing management AND wounds OR injuries AND Covid-19 OR coronavirus disease 2019. These are the keywords then entered in the search box in the electronic database and then filtered according to the following criteria: full text, issues ranging from 2019 - 2021, and using English.

### **Selection Criteria**

The article reviews systematic analysis of standards using the PICO model consisting of population, interventions, comparisons, and results in determining inclusion and exclusion criteria. Articles that will be included in the study if these specific inclusion criteria are: (1) the study focuses on nurses who practice chronic wound care in patients during Covid-19, (2) nursing management, (3) case studies, (4) years publication: 2019-2021, (5) full text, (6) articles in English. Exclusion criteria: (1) acute wound care (2) not discussing nursing management, (3) articles published before 2019, (4) full text (5) articles not in English.

### **Quality Assessment**

The assessment of research methodology for the quality of systematic review articles uses 18 JBI Critical Appraisal Checklist guidelines. The instrument used is the JBI Critical Appraisal Checklist for case series which consists of 10 questions (Joanna Briggs Institute, 2017). The JBI Critical Assessment Checklist was used for the purpose of assessing the quality of research methodology and to determine the extent to which research has addressed possible bias in its design, intervention, and analysis (Joanna Briggs Institute, 2017).

### **Study Selection**

Researcher uses a method in the form of a systematic review with descriptive narrative analysis of several main finding articles that discuss nursing management in treating wounds to patients during COVID-19. Guidelines for systematic review using Preferred Reporting Items for Systematic Review and Meta-Analyzes (PRISMA) and as a standard in reviewing and selecting articles. Specific information was extracted such as author, year of publication, journal name, study design, type of intervention, and results.

## **Result and Discussion**

Based on the PRISMA flow chart, the article selection process for this systematic review proceeded through several rigorous stages to ensure that only high-quality and relevant studies were included. During the identification stage, a total of 242 articles were retrieved from the selected databases. These consisted of 2 articles from EBSCO, 142 articles from ProQuest, and 98 articles from

PubMed. This broad search strategy reflects the diversity of available research and strengthens the evidence base by incorporating studies from multiple reputable sources.

At the screening stage, duplicate checking was conducted, resulting in the removal of 12 identical articles. This left 230 unique studies eligible for initial screening based on their titles and abstracts. The screening step is crucial in systematic reviews, as it allows researchers to filter out studies that do not align with the research focus. Following this screening, 195 articles were excluded because their content did not meet the predetermined inclusion criteria. Common reasons for exclusion at this stage included topics unrelated to wound care or telemedicine, studies focusing on non-clinical populations, and abstracts that did not provide sufficient information for consideration.

The eligibility stage involved the full-text assessment of 40 remaining articles. This stage further refined the selection by applying more specific criteria, including the relevance to nursing management, language of publication, and recency of research. At this point, 35 articles were excluded because they did not focus on nursing management, were not written in English, or were published before 2019—years prior to the rapid acceleration of telehealth technologies during and after the COVID-19 pandemic. As a result of this rigorous selection process, a total of 5 articles met all the inclusion criteria and were retained for the final synthesis.

The conceptual framework for this review is grounded in the definition of telemedicine as described by the World Health Organization (WHO). According to WHO, telemedicine represents a form of health service delivery in which distance becomes a determining factor. It involves healthcare professionals using information and communication technologies (ICT) to exchange valid and essential medical information. This exchange supports various aspects of healthcare, including diagnosis, treatment, prevention of disease and injury, as well as research, evaluation, and continuing professional education (Monaghesh et al., 2020). The WHO definition emphasizes not only the clinical utility of telemedicine but also its broader role in enhancing health system performance and improving health outcomes at both individual and community levels.

Integrating this definition with the findings of the screened studies reinforces the notion that telehealth and telemedicine have emerged as vital tools in modern healthcare delivery. Particularly in the context of wound care, these digital platforms offer remote monitoring, timely consultations, and continuous patient engagement, thus enabling clinicians to provide high-quality care despite geographical barriers. The alignment of the final selected articles with the WHO framework confirms that telemedicine is not merely a temporary solution but a sustainable approach that can enhance accessibility, efficiency, and continuity of care across diverse healthcare settings.

Telehealth has the prospect of addressing many of the key challenges in healthcare delivery during the COVID-19 outbreak. Telehealth has prospects for addressing many of the key challenges in healthcare delivery during the COVID-19 outbreak. In addition, telehealth can help us stay away from direct physical contact and reduce the risk of COVID transmission and ultimately provide sustainable care to the community. Health care and patients are forced to put forward telehealth tools as a problem solution to prevent and control COVID-19 infection (Bondini et al, 2020; Oropallo et al 2021). Telehealth is used as the default consultation method to prevent patients from reducing the risk of spreading disease. The current model implemented as part of the emergency response relies on the patient's ability to discuss the injury and its symptoms in order to reduce close contact and actions outside the home. The use of telehealth has a positive impact on wound healing, including a shorter

healing time and positive consumer feedback. All of the systems studied used telehealth communication between the wound specialist and the nurse present with the patient (Bondini et al., 2020).

The current standard model of chronic wound telecare such as diabetic foot ulcers includes in-hospital specialists who perform remote clinical examinations and decision-making, working closely with visiting nurses and patients. Wound care is a visual specialty. Numbers are the gold standard for diagnosis and treatment. Chronic wounds that condition long-term care require frequent monitoring and frequent follow-up visits. This involves traveling costs and long waiting times. This situation makes the wound care specialization an ideal specialty for telemedicine applications for wound care (Chittoria, 2012). Telehealth and telemedicine services can provide opportunities to improve nursing care for patients during COVID-19.

## **Conclusion**

This systematic review demonstrates that nursing management of chronic wound care during the COVID-19 pandemic relied consistently on telehealth and telemedicine approaches. Across the five included studies, telehealth was not an auxiliary option but a core modality that enabled continuity of care when face-to-face services were restricted. Nurses played a central role in coordinating remote wound assessment, patient education, and communication with wound care specialists. Visual-based monitoring, supported by digital communication platforms, allowed ongoing evaluation of wound conditions and timely clinical decision-making.

The findings indicate that telehealth-based wound care reduced the need for direct physical contact without interrupting essential nursing interventions. This approach supported infection prevention efforts while maintaining patient safety and care quality. Telemedicine also facilitated interdisciplinary collaboration, particularly between nurses and physicians, which is critical in managing complex chronic wounds that require regular monitoring and prompt adjustment of care plans.

From a nursing management perspective, the use of telehealth strengthened care coordination, optimized resource use, and improved access for vulnerable patients during the pandemic. However, effective implementation depended on nurses' clinical judgment, communication skills, and competence in using digital technologies. These competencies directly influenced the accuracy of wound assessment and the effectiveness of remote interventions.

In conclusion, telehealth and telemedicine proved to be practical and effective strategies for chronic wound care nursing management during COVID-19. The evidence supports their continued integration into routine wound care services beyond the pandemic period. Strengthening nurses' digital competencies and establishing clear clinical protocols are essential to ensure safe, consistent, and high-quality wound care delivery in both emergency and non-emergency contexts.

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