

Kangaroo Mother Program Facing the COVID-19 Pandemic

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Abstract

The Kangaroo Mother Program (PMC) is the most important Colombian contribution in the world in the field of neonatology; it is the golden strategy in the ambulatory management of premature newborns in Colombia, and within this philosophy it feels the commitment within the COVID-19 contingency to establish recommendations and guidelines to guarantee the continuity, opportunity and safety of the premature newborn and high-risk newborns.

This article will address how the Kangaroo Mother Program copes with the pandemic with its essential components, such as early departure from the kangaroo position with breastfeeding, which has shown a decrease in hospitalization time, a decrease in severe infections, and most importantly, empowers mother in the proper care of her child, which are vital elements of the mother-child bond.

Keywords: Program; Kangaroo Mother; Breastfeeding; Kangaroo Position; Kangaroo Nutrition

Introduction

In November 2019, the appearance of the most recent of the coronaviruses currently known as SARS-CoV-2/COVID-19 was reported in Wuhan, China, whose transmission between humans is extraordinarily efficient and, due to its incubation time, facilitates the presymptomatic transmission. On January 30, 2020, the World Health Organization (WHO) declared the COVID-19 outbreak as an international public health threat; was declared a pandemic on March 11, 2020 [2].

The acquisition of SARS-CoV-2/COVID-19 in neonates has been attributed to non-congenital routes, that is, horizontal transmission through aerosols or drops at the time of delivery or early or late postnatal, from an infected mother or a caregiver, be it family or health personnel [2].

At present, reducing morbidity and mortality and the consequences of low birth weight and prematurity has been feasible in affluent societies thanks to an improvement in the quality of life that has resulted in healthier pregnancies, an unrestricted path to care neonatal care and advances in the technology of this perinatal care [3].

Colombia is a pioneer in the implementation of the Mother Kangaroo Program and has obtained excellent results in the timely care of the mother and the newborn. With this, an important impact was achieved in the reduction of neonatal morbidity and mortality in the country [1]. The program also provides a favorable environment of protection, encouragement, union and love that strengthens the adequate growth and development of children.

Regarding newborns, the National Institute of Health (INS) confirmed that there are 98 cases registered in the country, as of July 8, 2020; 67 minors are active infections while 30 have already recovered. The death of a newborn was also recorded, in an event related to other causes.

In the context of newborns in Colombia, according to the location and complexity of the condition of these children, we have that around 47% of the children are at home with a mild affectation, around 39% have a moderate affectation and are hospitalized and the

11% are in serious or critical condition and are in intensive care units. Regarding the age distribution of the minors, 27 of the infections have been registered between the first and the seventh day of being born, while the remaining 71 cases occurred in the late neonatal stage, that is, between the ages of 8 and 28 days old [4].

What is known about COVID-19 in pregnant women and newborns is evidence under construction, therefore, rigid protocols cannot be established; You have to be flexible and be alert to new findings that are very fast and the evidence appears every day. Therefore, protocols that are not based on evidence are not acceptable. It is important to keep in mind that what is clearly good and beneficial, such as humanized care centered on the baby and the family, must continue to be provided during this pandemic [5].

The care of COVID-19 cases cannot have an impact on the care of newborns in general, because we must continue to provide comprehensive care as established in the comprehensive health care routes established in Resolution 3280. Kangaroo programs are inserts on this path [6].

Mothers and newborns should and need to practice the Kangaroo Mother method, stay in joint accommodation, especially after birth and during the establishment of breastfeeding, even mothers like babies with suspected or confirmed COVID-19. We must highlight the importance of allowing the continuity of the monitoring of newborns and their families and establishing a contingency plan in the context of the emergency due to the COVID-19 pandemic [2].

The generalities of care for newborns hospitalized in neonatal intensive care units recommend limiting admission only to the healthy father, mother or caregiver; The open door strategy for the whole family will be interrupted until the end of the pandemic, all personnel and those accompanying them must maintain protective measures for drops and contact, upon admission assess the risk of contact, respiratory symptoms and a history of fever in all incoming parents or caregivers, and maintain a distance of two meters around each newborn with their caregiver [7].

Care of the newborn child of a mother with suspected or confirmed COVID-19

Several scenarios are presented: in the delivery room, accommodation in the first 24 hours, at the time of discharge, and the outpatient follow-up of the Mother Kangaroo Program. At the time of delivery, the cord is clamped for one to three minutes, skin-to-skin contact should be made whenever possible, taking into account the mandatory use of personal protection elements, since the expulsive period is considered generator of aerosols. Breastfeeding should begin within the first hour of life, considering the benefit greater than the risk of transmission and disease associated with coronavirus (COVID-19), currently the presence of the virus in breastfeeding has not been demonstrated and It is recommended to start in the first hour of life [1].

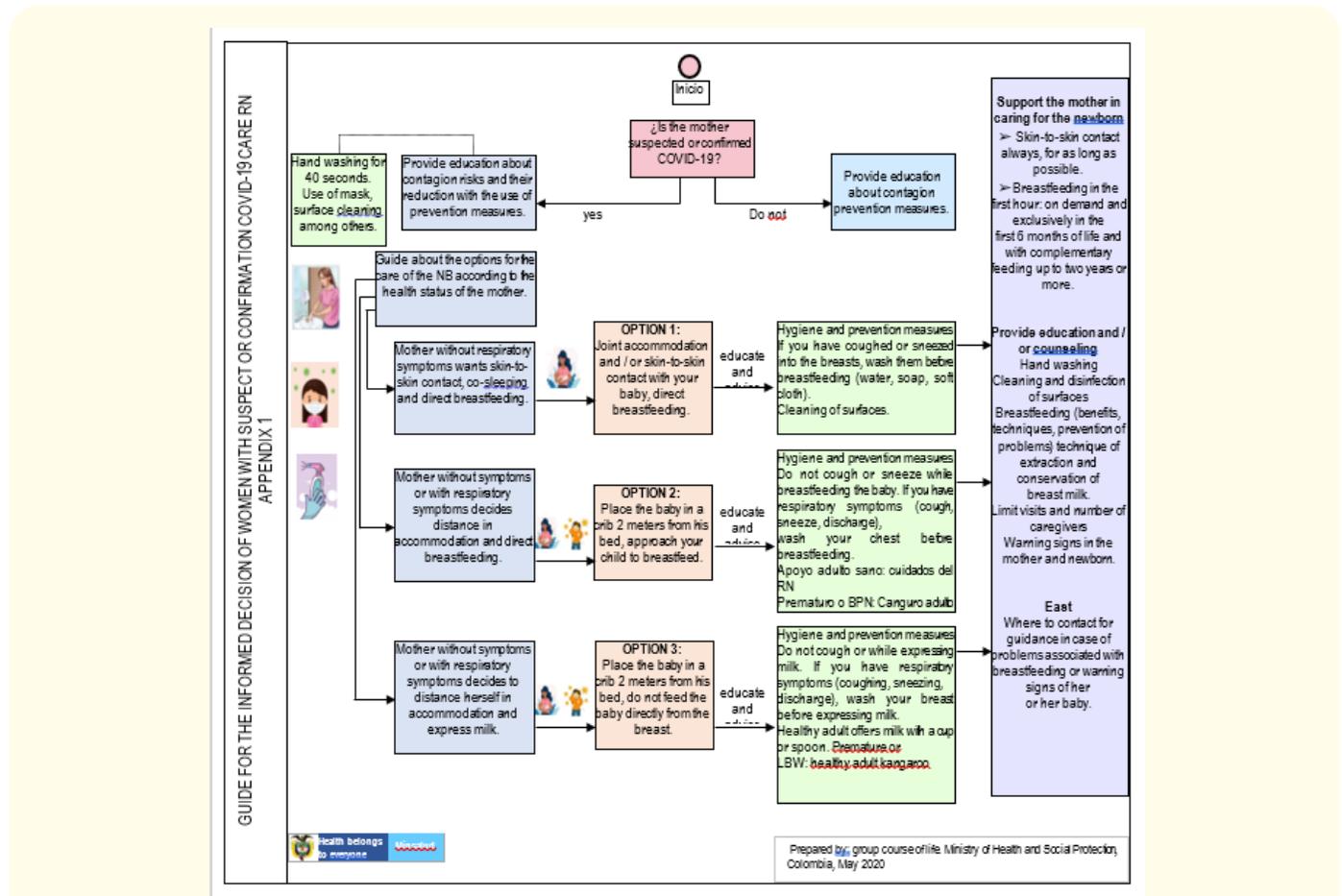


Figure 1: Guide for the informed decision of women with suspected or confirmed COVID 19-newborn care.

Education and support is provided to the mother about the risks of contagion to the newborn and about how to reduce the risk with prevention measures. The informed decision guide establishes three options: first option, a mother without respiratory symptoms where she makes skin-to-skin contact and breastfeeding with recommendations for hygiene and prevention measures; second option where the mother can be with or without respiratory symptoms, decides to have distance in the joint accommodation and give direct breastfeeding, and is educated about the recommendations of hygiene and prevention measures; Third option, a mother with or without respiratory symptoms decides to distance herself in joint accommodation and provide expressed breastfeeding with the support of a healthy caregiver and provider of the kangaroo position, with recommendations for hygiene and prevention measures [7].

Asymptomatic mother with suspected or confirmed COVID-19 infection and asymptomatic newborn

For its management, three scenarios are considered:

1. Postpartum joint accommodation as recommended by the WHO: the mother wears the mask permanently, she has her newborn in a crib more or less two meters away. In some countries some additional protective masks are being used for newborns as in Asian countries; In Latin America they are currently being used in Mexico and in some institutions they are already doing it systematically; a nurse is provided who is dedicated to the exclusive care of the breast and baby who are positive or suspected of being positive it is important that the mother is in a single joint accommodation with these isolation characteristics [1].
2. Management at home: if the newborn is not hospitalized and if the mother signs the consent for joint accommodation with isolation measures at home, discharge will be given with all the protection indications for the mother, the newborn and the family.

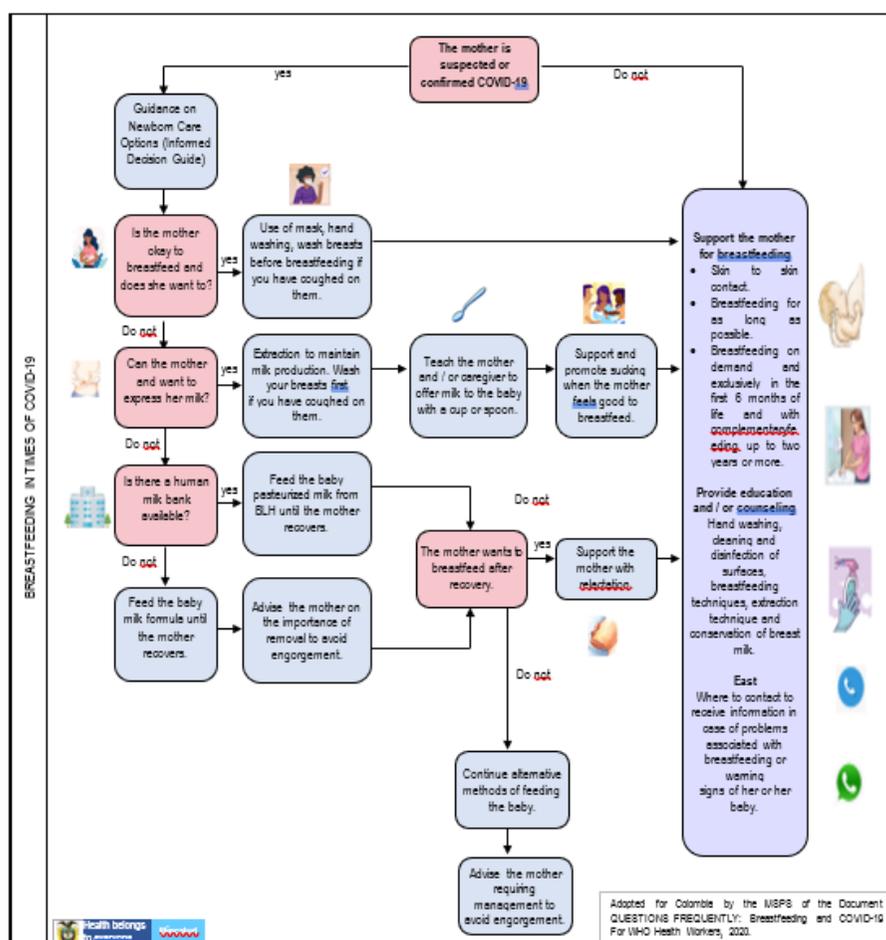


Figure 2: Breastfeeding. Algorithm adapted by the World Health Organization in Colombia.

Source: provisional guidelines for the health care of pregnant women, in the context of the covid-19 pandemic in Colombia.

Management of newborns born to mothers with suspected or positive COVID 19: recommendations of the world health organization (WHO)

The world health organization recommends maintaining breastfeeding for both cases of mothers with confirmed and probable infection, as long as measures are maintained for the prevention of infection by microorganisms transmitted by drops and by contact. In cases of mothers with serious illness, it is recommended to help the mother to express milk, skin-to-skin contact is recommended even in the presence of SARS-Cov-2-COVID-19 infection, taking into account its short-term impact and long-term from a public health point of view [8].

The American Academy of Pediatrics (AAP) and the Spanish Society of Neonatology recommend individualizing the direct contact of the newborn with the mother, according to the clinical and particular scenario [8].

The Pan American Health Organization in the management of babies born to COVID-19 mothers, suspected or confirmed, recommends that mothers and newborns can be accommodated according to the usual practice of the center. During the hospitalization of childbirth, the mother should keep a reasonable distance from her child when possible, when the mother provides practical care for her newborn should wear a mask, and perform hand hygiene; The use of a crib can facilitate distancing and provide the baby with an additional measure of protection against respiratory droplets [9].

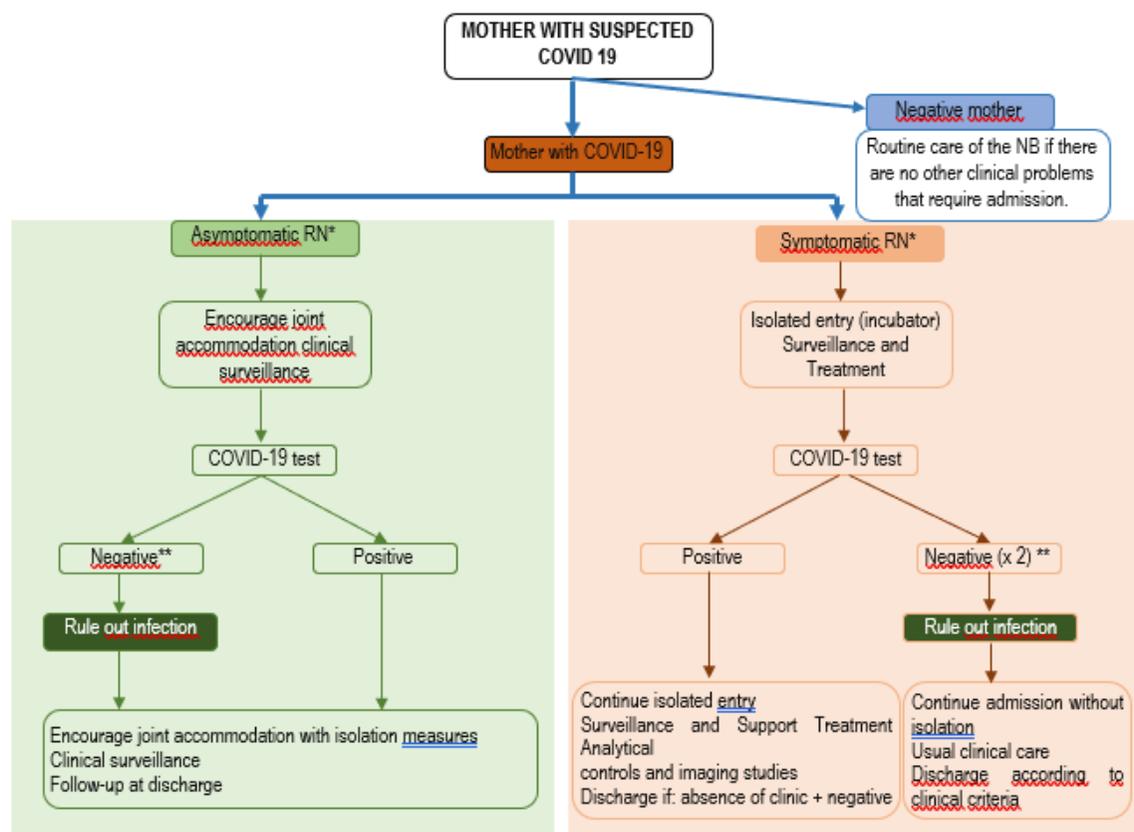


Figure 3: Algorithm for perinatal management of the newborn of a mother with suspected COVID 19. (Spanish Society of Neonatology).

Source: Algorithm recommendations for the perinatal management of the newborn of a mother with suspected COVID-19.

Kangaroo mother program against the COVID-19 pandemic

Inpatient kangaroo

The Intra-Hospital Kangaroo Program is permanently continued; The promotion of breastfeeding, the kangaroo position, the benefits of skin-to-skin contact, hand washing, protection measures by drops and contact and the norms for admission to the newborn unit are encouraged, and doubts are resolved. The collective education is currently carried out in a personalized way where the nurse works with the parents in the unit individually about the Intra-Hospital Mother Kangaroo Program [10].

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Hospital discharge

In all children of women with suspected or confirmed COVID-19, infection should be ruled out by RT-PCR within 24 - 48 hours after delivery. If the molecular test is negative and if you have high suspicion for SARS-CoV-2, the molecular test PCR-RT should be repeated 48 to 72 hours later. Extramural-domiciliary follow-up should be carried out and the warning signs should be emphasized; in this way, the discharge of babies is articulated with the programs that will be in charge of monitoring on an outpatient basis [7].

For the hospital discharge of the newborn who has been asymptomatic and for discharge, isolation for 14 days of the mother and the newborn is determined, maintaining the joint accommodation day and night, frequent hand washing for 40 to 60 seconds before touching the child or expressing breast milk, permanently wear a standard surgical mask (completely covering the nose and mouth), avoid talking especially during breastfeeding or expressing milk, and maintain routine disinfection measures of the surfaces that it comes into contact with [7].

National and international recommendations

General measures for the newborn with low birth weight or preterm, with parents without suspicion of infection or close contact with SARS-CoV-2.

In the healthy mother without suspected infection or close contact with SARS-CoV-2 and with a stable asymptomatic preterm or low birth weight (LBW) newborn, co-housing, direct breastfeeding and skin-to-skin contact should be maintained. immediate skin; the discharge must ensure the corresponding follow-up from a Mother Kangaroo Program (PMC) according to the current guidelines. Hospitalization due to immaturity or underweight will follow the established institutional protocols, with the current technical guidelines [7].

The outpatient Kangaroo program has 2 phases, the first phase from the time of discharge until the baby reaches 40 weeks, the guideline established in the first phase begins with the day hospital service. Care must be ensured throughout the pandemic; The first consultation should be in the first 48 hours after discharge because they are small babies and the kangaroo adaptation (position and nutrition) needs to be controlled and reinforced to guarantee safety at home [7].

Parents are given an emergency telephone number 24 hours/7 days, attended by pediatrics; Only one companion per patient will attend the consultation, ideally the healthy mother. The parents will be called the day before the consultation to find out if they are respiratory symptoms, and the care of the newborn kangaroo at home should only be carried out by two people [7].

In cases of negative newborns of positive COVID-19 mothers, the mother should not attend the consultation until the end of her quarantine. The child must be skin to skin with a healthy family member who must have a mask, with hand hygiene; The babysitter provider must not be an adult over the age of 60 or under the age of 18. You should come to the program if possible with expressed breast milk to administer during the consultation and you should inform the doctor of the mother's diagnosis [7].

The second phase starts from 40 weeks to 12 months of corrected age. Controls are carried out with the entire multidisciplinary team (pediatrician, nurse, psychologist, optometrist, audiology, ophthalmologist). This phase should be progressively restarted starting with the highest risk children; In-person consultations will be carried out according to current technical guidelines and follow-up can be done by interactive telemedicine in special and defined cases.

Vaccination of newborns of asymptomatic mothers (without suspicion or infection by SARS-CoV-2) is carried out in accordance with the current recommendations of the Expanded Program of Immunizations (PAI) and the technical guidelines of the PMC in force of the Ministry of Health Protection Social. The indication for the administration of palivizumab is the same as in preterm patients before the COVID-19 pandemic.

Conclusion

The kangaroo program strategy enables the mother to achieve the attachment of her child, gain experience in caring for her and experience the joy and gratification of her role in the program, favoring early interactions between parents and children, in order to promote attachment, decrease the length of stay in the neonatal care unit, reduce the risk of hospital readmissions and decrease long-term morbidity during the COVID-19 pandemic.

The kangaroo method allows parents to develop more confidence in the care of their children, offers support and security tools to parents in order to minimize the emotional impacts that have not been long in the face of stressful situations and ignorance of a pandemic that may affect the health of your children.

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