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## Kangaroo care during the SARS-CoV-2 pandemic in Spain<sup>☆</sup>



### El método canguro durante la pandemia por SARS-CoV-2 en España

To the editor:

The coronavirus disease 2019 (COVID-19) pandemic started in Wuhan (China) in December 2019. The novel coronavirus (SARS-CoV-2) spread rapidly through every country in the world, and in March 2020 the first case in a neonate was detected in Spain.<sup>1</sup>

In neonatal units, the practice of kangaroo care (KC) was affected in the first months of the pandemic due to the lack of robust evidence on the mechanisms of viral transmission and the potential impact on neonates.<sup>2</sup> For instance, to guarantee infant safety, the University Hospital of Padua (Italy) implemented screening of all neonates, parents and health care professionals in neonatal units, which achieved good outcomes even at times when the incidence was peaking.<sup>3</sup>

The aim of our study was to assess the impact of the SARS-CoV-2 pandemic on KC in neonatal units in Spain and identify possible opportunities for improvement in the context of the pandemic.

We conducted a cross-sectional, observational and descriptive study. We developed an ad hoc questionnaire that was distributed through social networks to professionals staffing neonatal units in Spain. The study focused on assessing the impact of the pandemic on KC and the opinions and perceptions of health care workers regarding the situation.

A total of 263 health care workers, with representation of every autonomous community in Spain, participated in the survey, the results of which are summarised in Table 1.

As would be expected, there was evidence of a decrease in the unrestricted practice of KC during the pandemic, from a frequency of 97% before the pandemic based on data pub-

lished in 2020 by López et al<sup>4</sup> to 46% based on our findings. In addition, the proportion of units that offered unrestricted 24-hour access to parents decreased from 95.4% to 85.2%.<sup>4</sup>

At the international level, a similar study in the United States found a significant decrease in parental presence (from 85% to 53%) and parental participation in infant care (71% to 32%), leading the authors to conclude that restrictions had significantly limited the presence of families in neonatal units.<sup>2</sup>

Despite the low incidence of SARS-CoV-2 infection in neonates, as evinced by data from the Sociedad Española de Neonatología (Spanish Society of Neonatology),<sup>1</sup> the pandemic has brought significant changes in neonatal care delivery and practices, with a negative impact on practices in which there had been substantial progress.<sup>5</sup> In March 2020, as the pandemic emerged, uncertainty and the rapid spread of the virus led to the implementation of measures that restricted parental visits to neonatal units, with an impact on their active participation in infant care, including KC, and barring grandparents, siblings and other relatives that provided psychological and social support to the parents from the units.

These restrictive strategies meant to reduce the spread of the virus and protect neonates and health care workers carried different risks for infants and their families and were a source of additional concern for health care workers on account of their potential impact, as limiting developmental care practices could have a negative impact on parent-child bonding, the prevalence of breastfeeding and neurodevelopmental outcomes in preterm infants.<sup>5,6</sup>

The current global health crisis and constant changes in protocols and guidelines constitute a substantial professional and emotional challenge.<sup>6</sup> But as the data available to date suggest,<sup>1-4</sup> the risk of vertical transmission in the infant is very low. In addition, the benefits offered by KC, parent-child bonding and breastfeeding vastly exceed the risks associated with infection by SARS-CoV-2 in newborn infants.

After a very slow introduction of KC, which has taken more than 20 years in neonatal units in Spain, the pandemic has had a substantial negative impact on its practice. In only a few months, there has been a significant decrease in the practice of KC due to general restrictions on parental presence in neonatal units and specific restrictions on skin-to-skin contact that may have a negative impact on infants and their families. If there is uncertainty regarding potential

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**Table 1** Resulted of the survey on the impact of the SARS-CoV-2 pandemic on kangaroo care in neonatal units in Spain.

Items	Total (N = 263)
Restrictions to parental access to the unit at any point in the pandemic	179 (68.1%)
Restrictions to access of siblings and other family members to the unit at any point in the pandemic	262 (99.6%)
Provided parents written information regarding the unit, rules, hygiene and protective measures against COVID-19	193 (73.4%)
Specific preventive measures for the practice of kangaroo care during the pandemic	91 (34.6%)
Restrictions on kangaroo care during pandemic	
No	121 (46%)
Time limits	18 (6.8%)
Limit on individuals performing care (only 1 parent)	69 (26.2%)
Limit on individuals performing care (only 2 parents)	25 (9.5%)
Other	30 (11.4%)
At present, the unit remains open 24 hours	224 (85.2%)
At present, there are restrictions to parental access to unit	
No restrictions	51 (19.4%)
Only 1 parent WITH time restrictions	30 (11.4%)
Only 1 parent WITHOUT time restrictions	173 (65.8%)
Both parents WITH time restrictions	9 (3.4%)
At present, kangaroo care is part of the routine care of infants in the unit	250 (95.1%)
The provided written information sufficed to address the needs of families and guarantee safety	127 (52.5%)
Use of masks could be a barrier to bonding between parents and newborn infants	107 (40.7%)
The pandemic may have increased parental stress and fear of transmitting the virus to their babies through kangaroo care	206 (78.3%)
Impact of pandemic on frequency of kangaroo care sessions	
Increase in sessions	6 (2.3%)
Decrease in sessions	158 (60.1%)
No impact	99 (37.6%)
Restrictions on 24-hour access to unit should be imposed or maintained	104 (39.5%)
Restrictions on kangaroo care should be imposed or maintained	53 (20.2%)
Impact of measures and restrictions related to the pandemic on breastfeeding	
No impact	60 (23.4%)
Low impact	131 (51.2%)
High impact	61 (23.8%)
No answer	4 (1.6%)

transmission, a screening programme could be contemplated, or even prioritizing the vaccination of families with infants in neonatal units.

## Conflicts of interest

The authors have no conflicts of interest to declare.

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## Comparison between patients attended in the emergency department of a tertiary hospital in Madrid in the first and second wave of coronavirus SARS-CoV-2 pandemic<sup>☆,☆☆</sup>



### Comparación entre la primera y la segunda ola de la pandemia producida por el coronavirus SARS-CoV-2 en urgencias pediátricas de un hospital terciario de Madrid

Dear Editor:

The management of coronavirus disease 2019 (COVID-19) has been changing since the beginning of the pandemic caused by this virus (SARS-CoV-2).

The initial lack of knowledge on the pathogenic mechanisms of the virus, the absence of published evidence and the severity of disease in adult patients led to therapeutic approaches in the first wave of the pandemic that have been changing as our understanding of the disease improved.<sup>1</sup> We conducted a retrospective descriptive study in the paediatric emergency department of the Hospital Universitario La Paz in Madrid, Spain, analysing and comparing the characteristics of patients and their management in the first wave (31/03/2020–26/06/2020) and second wave (20/07/2020–30/11/2020) of the pandemic.

In the first wave, 74 patients received a diagnosis of SARS-CoV-2 infection,<sup>2,3</sup> compared to 180 patients in the second wave. Table 1 summarises the main characteristics of the cases.

The median age of the total sample under study was 62.7 months (interquartile range [IQR], 254), and 56.7% were male. We did not find differences in the age and sex distribution of patients between the 2 waves.

At first, all cases were confirmed by means of the polymerase chain reaction (PCR) test, which was the only test available at the time.<sup>2,3</sup>

In the second wave, antigen tests were already available and led to the detection of 40 of the cases (22.2%).

In the first wave, the SARS-CoV-2 PCR test was only ordered in patients that required admission or that were symptomatic and had underlying disease.<sup>2,3</sup> In the second wave, testing was performed in all patients with compatible symptoms, that required admission or that were asymptomatic but with known contact with a positive case in the household. This is reflected in the higher percentage of patients with underlying disease in the first wave.<sup>2,3</sup> In addition, the proportion of cases detected in asymptomatic patients was much smaller in the first wave compared to the second.

Overall, the triage level was higher in patients in the first wave, when level 3 was most frequent, compared to level 4 in the second wave.<sup>2,3</sup>

When it came to clinical manifestations, we found statistically significant differences between the 2 waves in the proportion of patients presenting with cough and food refusal, both of which were more frequent in the first wave.<sup>3</sup> In the second wave, there was a significantly greater proportion of patients without symptoms suggestive of COVID-19.

The most frequent diagnoses in both waves were upper respiratory tract infection and fever without a source.<sup>2,3</sup> In the first wave, there were 8 cases of pneumonia, compared to none in the second wave. In the first wave, a chest X-ray was performed in most patients due to extrapolation of the management in adults. In the second wave, as experience grew and it became apparent that pneumonia was rare in children, this test was no longer performed routinely. It is likely that the frequency of pneumonia was overestimated in the first wave, with mild infiltration interpreted as possible pneumonia foci. We reviewed records to determine whether patients returned to the emergency department within 72 h of the initial visit to rule out the presence of complications secondary to the infection, including pneumonia.

The number of admissions and the length of stay were significantly lower in the second wave (first wave, median LOS, 4 days [IQR, 29]; second wave, median LOS, 2 days [IQR, 7]).<sup>2,3</sup>

There were no significant differences in the frequency of admission to the intensive care unit.

We analysed the management of symptomatic patients in each wave. In the first wave, management was more aggressive, with performance of blood tests and a chest X-ray in a significantly greater proportion of patients. None of

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