

In this article, we present the case of a neonate born before term to a mother with COVID-19 whose symptoms were most likely due to prematurity. The persistence of positive PCR results with low Ct values in the infant and the early timing of the first positive result suggest early infection. Although it is possible that the infant was infected in utero, this case is not sufficient to prove the possibility of vertical transmission.

The vertical transmission of SARS-CoV-2 is not well known. Although there have been reports of detection of the virus in the placenta, amniotic fluid, umbilical cord blood and human milk,<sup>6</sup> most of the SARS-CoV-2 tests conducted in neonates born to infected mothers are negative,<sup>3</sup> so data is inconclusive to prove vertical infection.

It is reasonable to conclude that vertical transmission of SARS-CoV-2 in infants born to mothers that are positive for the virus is possible and requires further research. Contact and droplet isolation measures should be implemented and maintained through the hospital stay until the PCR tests in respiratory secretion samples become negative, as seroconversion is rare in neonates, especially those born preterm.

## References

1. Blumberg DA, Underwood MA, Hedriana HL, Lakshminrusimha S. Vertical transmission of SARS-CoV-2: what is the optimal definition? *Am J Perinatol.* 2020;37:769–72.
2. Kotlyar AM, Grechukhina O, Chen A, Popkhadze S, Grimshaw A, Tal O, et al. Vertical transmission of coronavirus disease 2019: a systematic review and meta-analysis. *Am J Obstet Gynecol.* 2021;224:35–53.

3. Solís-García G, Gutiérrez-Vélez A, Pescador Chamorro I, Zamora-Flores E, Vigil-Vázquez S, Rodríguez-Corrales E, et al. Epidemiology, management and risk of SARS-CoV-2 transmission in a cohort of newborns born to mothers diagnosed with COVID-19 infection. *An Pediatr (Engl Ed).* 2021;94(3):173–8.
4. Calvo C, López-Hortelano MG, Vicente JCC, Martínez JLV. Grupo de trabajo de la Asociación Española de Pediatría para el brote de infección por Coronavirus, colaboradores con el Ministerio de Sanidad; Miembros del Grupo de Expertos de la AEP. [Recommendations on the clinical management of the COVID-19 infection by the «new coronavirus» SARS-CoV2. Spanish Paediatric Association working group]. *An Pediatr (Barc).* 2020;92:241.
5. Sociedad Española de Neonatología. Recomendaciones para el manejo del recién nacido en relación con la infección por SARS-CoV-2 Versión 6.2, 2020. [Accessed 14 February 2021]. Available from: <https://www.seneo.es/>.
6. Fenizia C, Biasin M, Cetin I, Vergani P, Mileto D, Spinillo A, et al. Analysis of SARS-CoV-2 vertical transmission during pregnancy. *Nat Commun.* 2020;11:5128.

Elena María Márquez Isidro\*, María Jesús García García, María Solo de Zaldívar Tristancho, Rafael Romero Peguero  
*Servicio de Pediatría, Hospital San Pedro de Alcántara, Cáceres, Spain*

\* Corresponding author.

E-mail address: [elenamaria.marquez@salud-juntaex.es](mailto:elenamaria.marquez@salud-juntaex.es) (E.M. Márquez Isidro).

<https://doi.org/10.1016/j.anpede.2021.05.005>  
2341-2879/ © 2021 Asociación Española de Pediatría. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## E-mail consultation assessment during COVID-19 pandemic<sup>☆</sup>



### Balance de la consulta por correo electrónico en la pandemia COVID-19

Dear Editor:

The COVID-19 has brought about a revolution in the doctor-patient relationship worldwide. The diagnosis, treatment, control and prevention of this infectious disease has become the top priority for health care workers and the general population.

In adherence with the protocols established by the Ministry of Health of Spain,<sup>1</sup> health care delivery should be preferentially remote to prevent potential transmission of the virus in health care settings. This has led to significant changes in work practices for health care professionals, and more limited access of patients to health services. In-person visits have been partly replaced by telemedicine.

During the pandemic, children were confined to the home between March 15 and April 26, 2020. In-person visits had to be agreed on by the provider and the patient, who have to decide whether care should be delivered in person or remotely.

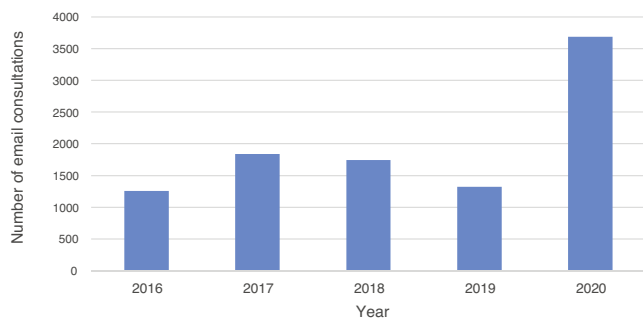
Most patients with COVID-19 can be managed remotely,<sup>2</sup> but a large part of other health problems require in-person assessment.

The extensive use of the telephone as a vehicle for communicating with patients has made it harder to gain access to providers. Due to the preferential delivery of care through the telephone<sup>1,3</sup> and contact tracing and tracking of COVID cases from primary care centres, the phone lines are saturated. Based on the protocols imposed by the Ministry of Health,<sup>1</sup> COVID-19 patients and their contacts must be quarantined for a minimum of 10 days and monitored by the corresponding doctor every day.

In health care facilities where email has been used regularly for years, access to providers is more agile and health care users are familiarised with it.

In our primary care centre, 2 paediatricians and 2 paediatric nurses manage a caseload of 2400 children. The paediatric team uses a dedicated organizational email account. We offer email access to the entire catchment population. After 5 years, we have succeeded in establishing constant and sustained use of this means of communication. The second year after introducing email access, we

<sup>☆</sup> Please cite this article as: Peña Blasco G, Bartolomé Lanza ML, Blasco Pérez-Aramendía MJ. Balance de la consulta por correo electrónico en la pandemia COVID-19. *An Pediatr (Barc).* 2021;95:377–378.



**Figure 1** Number of email consultations per year, 2016 through 2020 (year of the lockdown).

found a substantial increase in its use to levels that have subsequently remained stable (Fig. 1).

The fifth year, which coincided with the COVID-19 pandemic and the lockdown (from 15-3-2020), there was a nearly 3-fold increase in the number of email consultations. This vehicle was very useful, as it increased accessibility for health care users, compared to the overwhelmed phone lines. We calculated that, on average, there were 15.16 email consultations per day, which increased to as many as 19.6 per day during the lockdown period. One out of 5 families used this service. The reasons for email consultation were very varied: 31% consulted for administrative matters (renewal of prescriptions, access to reports, appointment scheduling...), 41% sought health-related advice (on aspects like nutrition, COVID-19), 27% consulted due to acute diseases (such as colds or gastrointestinal symptoms) or chronic diseases (such as diabetes or ADHD) and 1% for personal reasons (such as a separation), and the use of email was always avoided in the case of emergencies. All email communications are recorded in the health records. Initially, sending photographs by email was discouraged due to potential legal problems concerning confidentiality.<sup>4,5</sup> But the pandemic and the ensuing difficulty in accessing health care services have made the use of photographs widespread in the case of cutaneous manifestations. We submitted these images to the referral dermatologists through the virtual interconsultation system. This requires parental consent. Wait times to receive an expert opinion from the dermatologist shortened considerably. Travel of children and parents to specialty clinics was avoided, thus eliminating the risk of transmission.

The cost of an initial visit with a specialist, based on data of the government gazette of Aragon (BOA no. 156 of 10/08/2012) and adjusted for inflation for year 2020, is of €125.42, while the cost of check-up visits amounts to €75.23. We did not have reference data for the cost of virtual visits, but they would save costs, as specialists save time with this format.

This also saved time for the paediatrics team, as it improved time management. And it also resulted in an overall saving of health care resources, as it is a very inexpensive tool. Users report a high level of satisfaction with this service.<sup>6</sup>

The routine childhood vaccination programme was not discontinued at any point during the pandemic. It was imple-

mented on an "aseptic" time slot, first thing in the morning, reserving the management of patients with infectious disease to later in the day.<sup>3</sup>

The potential legal ramifications of using emerging technologies in care delivery<sup>4,5</sup> do not justify discontinuation of this service. This is a support tool never meant to replace the face-to-face relationship with the patient, but rather meant to reinforce it.

All of the above evinces the need to keep email consultations active during and after the pandemic.

## Conflicts of interest

The authors have no conflicts of interest to declare.

## References

1. Manejo pediátrico en atención primaria del COVID-19 Versión del 18 de noviembre de 2020 [accessed 10 Ene 2021]. Available from: [https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov/documentos/Manejo\\_pediatria\\_ap.pdf](https://www.mscbs.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov/documentos/Manejo_pediatria_ap.pdf).
2. Greenhalgh T, Choon G, Car J. COVID-19: a remote assessment in primary care. *BMJ*. 2020;368, <http://dx.doi.org/10.1136/bmj.m1182>.
3. Suárez Vicent E, Gorrotxategi Gorrotxategi PJ, Sánchez Pina C, Villaizán Pérez C, Cenarro Guerrero MT, Cantarero Vallejo MD, et al. Propuesta de abordaje y organización de las consultas de Pediatría de Atención Primaria en la pandemia por SARS-CoV-2 (otoño-invierno 2020-2021). *Rev Pediatr Aten Primaria*. 2020;22:241-50.
4. Muñoz Fernández L, Díaz García E, Gallego Riestra E. Las responsabilidades derivadas del uso de las tecnologías de la información y comunicación en el ejercicio de las profesiones sanitarias. *An Pediatr (Barc)*. 2020;92:307.e1-6.
5. Bravo J, Merino M. Uso de nuevas tecnologías en la comunicación con los pacientes, su utilidad y sus riesgos. *An Pediatr (Barc)*. 2020;92:251-2.
6. Gil Giménez N, Peña Blasco G, Bartolomé Lanza L, Atance Melendo E, Buil Langarita S, Blasco Pérez-Aramendía MJ. Valoración económica de la consulta por correo electrónico y su importancia en COVID-19; experiencia de 5 años. *Rev Pediatr Aten Primaria*. 2021;23:43-51.

Guillermo Peña Blasco<sup>a,\*</sup>,  
María Lucía Bartolomé Lanza<sup>b,c</sup>,  
María Jesús Blasco Pérez-Aramendía<sup>b,c</sup>

<sup>a</sup> *Departamento de Análisis Económico, Universidad de Zaragoza, Zaragoza, Spain*

<sup>b</sup> *Centro de Salud Valdefierro, Zaragoza, Spain*

<sup>c</sup> *Departamento de Pediatría, Universidad de Zaragoza, Zaragoza, Spain*

\* Corresponding author.

E-mail address: [gpena@unizar.es](mailto:gpena@unizar.es) (G. Peña Blasco).

<https://doi.org/10.1016/j.anpede.2021.05.007>  
2341-2879/ © 2021 Asociación Española de Pediatría. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).