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When the Need is Greater Than Feasible

Cuando la necesidad es mayor de lo factible

Dear Editor:

An unexpected cruel pandemic has been able to paralyze not only our lives but also, somehow, our hopes. Digital transformation in healthcare has become essential to survive, subsist and resist. Huge efforts are made to generate impact and visibility, measured in “likes” or followers; however, we have not been able to work as a “global” system on tools generating value in terms of health among citizens. There are thousands of Smartphones applications available to download but in most cases it is difficult to validate their quality and regulate their content, both mandatory to properly manage patients’ data and achieve adequate dissemination of scientific information.¹

Benefits of pulmonary rehabilitation are well known, not only within chronic processes but also after acute events, such as pneumonia or thoracic surgical procedures. Up to now, the only way to corner the virus is social distancing, and due to person-to-person spread of the virus occurs mainly via respiratory droplets, some respiratory exercises are discouraged without wearing appropriate personal protective equipment.² Thus, some patients have limitations to get access to pulmonary rehabilitation, which could result in suboptimal recovery or even developing pulmonary complications once they are supposed to have overcome COVID-19. In this setting, chances for e-Health tools turn into imperatives, and health community is compelled to provide patients with global and affordable resources transcending social and geographical issues.

A group of Spanish thoracic surgeons and physiotherapists from Hospital Clínic San Carlos in Madrid created Fissios App³ (Fig. 1), a free Smartphone application that guides patients scheduled for

a thoracic surgical procedure through a chest physical exercises program. A series of basic and simple exercises are displayed to teach, from the basic correct position to muscle strengthening techniques or secretion drainage. This method uses animations that show the ranges of movement complemented by a text panel explaining their execution in detail. All of this is meant to be done in a safe and self-sufficient manner. The initial experiences were very satisfactory and were positively evaluated by most of the users through feedback questionnaires.⁴ Several scientific societies have commented on the advantages of respiratory physiotherapy in patients affected by COVID-19, mainly at the time of discharge and those patients with mild symptoms.⁵ At *Fissios App* we continue with our commitment and responsibility by preparing a “COVID-19 section” of the App that allows us to specifically guide all the patients that happily overcome the disease, in a special and instructive way, under the hypothesis that the performance of respiratory physiotherapy exercises may improve their recovery.

Perhaps after all this, at last, the “mutualist” mentality will arrive and we will be able to learn that, if we do not protect the group, individual success will be of little use and that transcendence lies in surviving as a species. Perhaps after all this, it will happen that, for really important issues such as the health of individuals and that of the collective, feasible may exceed needs, and we will thus be permanently prepared to face new challenges.

Conflicts of interest

None.

References

- Joy CE, Edlin, Ranjit P, Deshpande. Caveats of smartphone applications for the cardiothoracic trainee. J Thorac Cardiovasc Surg. 2013;146, <http://dx.doi.org/10.1016/j.jtcvs.2013.08.033>.
- Thomas P, Baldwin C, Bissett B, Boden I, Gosselink R, Granger CL, et al. Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations. J Physiother. 2020, <http://dx.doi.org/10.1016/j.jphys.2020.03.011>. ISSN 1836-9553.
- Tribalyte technologies, Fraile, et al. Fissios Web-App; 2020, April 13. Retrieved from: <https://fissiosapp.com>
- Olivero CAF, Jarabo Sarceda JR, Fernández Martín E, Trelles XW, Gómez Martínez AM, Calatayud Gastardi J, et al. Implementation and initial evaluation of a smartphone application to improve perioperative pulmonary rehabilitation in elective thoracic surgical patients. Oral communication. Book of abstract O040. 26th Meeting of the European Society of Thoracic Surgeons. Ljubljana, Slovenia, May 27th–30th. Madrid, Spain: Department of Thoracic Surgery, Hospital Clínic San Carlos; 2018. Retrieved from: <http://www.ests.org/userfiles/pages/files/ESTS18.Publication.BoA.v2.pdf>
- Zhonghua Jie He He Hu Xi Za Zhi. Chinese Association of Rehabilitation Medicine; Respiratory Rehabilitation Committee of Chinese Association of Rehabilitation Medicine; Cardiopulmonary Rehabilitation Group of Chinese Society of Physical Medicine and Rehabilitation. Recommendations for respiratory rehabilitation of COVID-19 in adults, vol. 43; 2020. p. E029, <http://dx.doi.org/10.3760/cma.j.cn112147-20200228-00206>.



Fig. 1. Fissios App Logo.

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The Indirect Impact of COVID-19 on Children With Asthma

El impacto indirecto de la covid-19 en los niños con asma

Dear Editor:

One of the few positive features of the SARS-CoV-2 pandemic has been the significant reduction in paediatric hospital admissions and attendances to urgent care settings.¹ Early evidence from China and Italy indicated that children fared better than adults with lower SARS-CoV-2 infection rates, a lower incidence of severe disease and minimal mortality.^{2–4} The reduction in attendances however includes other anticipated illnesses which would not have been predicted. In our hospital we have noted a marked reduction in children and young people presenting with acute asthma/wheeze.

We reviewed the numbers of acute hospital presentations with wheeze/asthma in children aged 1–17 years of age over the four weeks prior to the UK national lockdown on March 23rd 2020 and the 8 weeks afterwards. For comparison, we reviewed presentations in the same calendar weeks in 2017–2019. Our paediatric

asthma nurses record every acute wheeze/asthma attendance at St George's Hospital in South West London on a daily basis allowing direct comparison.

The figure shows the total number of emergency attendances for each week during the 12-week period for each year (Fig. 1). In 2020, prior to the lockdown, an average of 17 children (range 16–19) presented each week and was comparable to attendance rates in 2017–2019. This fell to 2 acute presentations per week (range 0–5) in the eight weeks after the national lockdown. In previous years, although there were trends to lower admissions corresponding to the school spring vacation (weeks 14–16), the comparative numbers of attendances remained consistently higher. Even though some families may have taken pre-emptive action prior to the government announcement, the significant fall in attendances coincided at the point of the Government announcement. Overall there has been a 90% reduction in attendances over the 8 week lockdown period compared to 2017–2019.

There are a number of potential factors which may have impacted on this observation. Our initial concern was that patients/parents were avoiding presentation to hospital due to concerns about the risk of exposure to COVID-19 in hospital and in

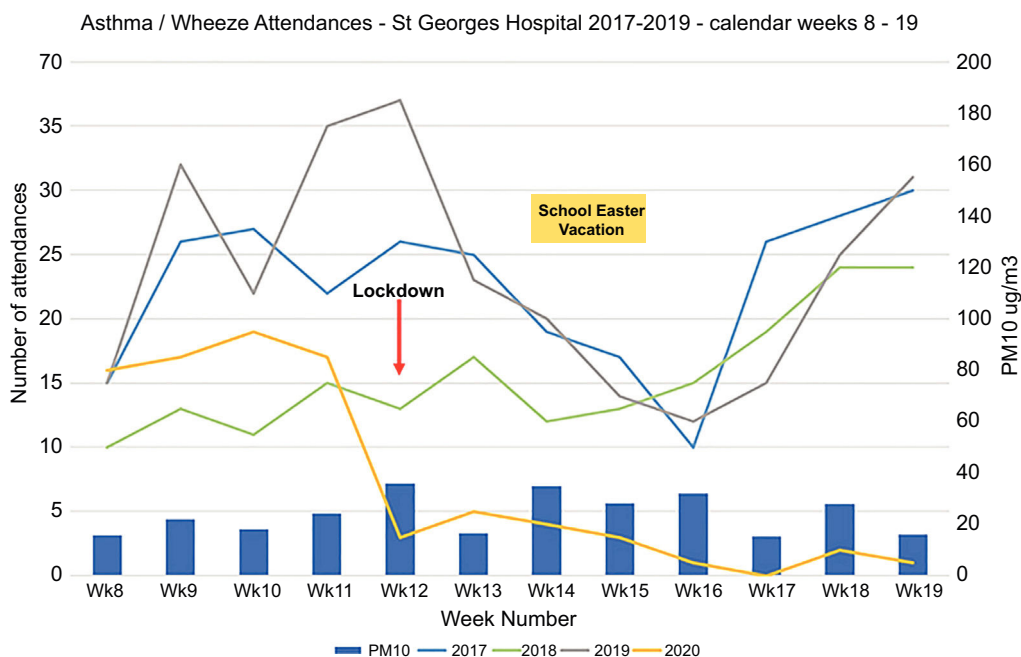


Fig. 1. Asthma/wheeze attendances to St George's Hospital Paediatric Emergency Department before and after COVID-19 Lockdown 2020 in comparison to 2017–2019 attendances. Bars indicate mean weekly atmospheric PM10 levels ($\mu\text{g}/\text{m}^3$).