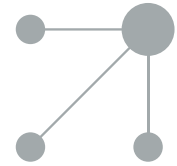




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EDITORIAL

Patient-centered primary care pediatrics. Is a paradigm change needed?☆



Pediatría de atención primaria centrada en el paciente. ¿Se necesita un cambio de paradigma?

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For many years, paediatric care has focused on acute diseases, predominantly those with an infectious aetiology. The substantial change in the prevalence of diseases with onset in childhood and the survival of these children has resulted in an epidemiological shift to a new situation characterised by a growing number of children with chronic diseases.¹

The high prevalence of chronic diseases in childhood calls for indicators that can guide primary care teams (PCTs) in prioritising interventions for implementation. In this regard, Barrio et al.² performed a study with the aim of analysing the characteristics, prevalence of comorbidities and health care service utilization of chronically ill paediatric patients in primary care, using the Adjusted Morbidity Group (AMG) system to stratify the study population into risk levels and analysing the factors associated with the level of complexity established based on the AMG. This work is relevant in that it proposes identification of patients with chronic diseases, establishing their level of risk based on the volume of used services and the factors associated with it, thus providing objective data to guide the allocation of health care resources at both the macro level (public health depart-

ments, areas or health districts) and the micro level (primary care centres).

In this case series, the authors found that as many as 15.7% of patients were chronically ill,² which corresponds to a substantial health care burden. In the stratification based on GMAs, 96.5% of these chronically ill patients were classified as low-risk, 3.3% as intermediate-risk and only 1 (0.2%) as high-risk. Greater service utilization and younger age had considerable weight in the estimation of the level of risk, although the complexity in the patient classified as high-risk was high and therefore this patient hardly used primary care services. These findings were consistent with the previous literature,¹ in which patients with rare conditions and high complexity are differentiated from patients with chronic diseases that are more common but entail special health care needs (SHCNs), such as asthma, obesity, neurodevelopmental disorders (NDDs) and learning or conduct disorders, among others.

Given the large proportion of children and youth with SHCNs, it is unrealistic to expect that their care will be based off regional subspecialty clinics, and the most suitable setting for care delivery in this population is the local primary care centre that these patients have been managed at since birth. Furthermore, PCTs can contribute to the continuity of care after hospital discharge, thus reducing the frequency of readmission and improving preventive care, especially in patients with chronic disease.³

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At present, the functional organization of paediatric care in PCTs includes health prevention and promotion activities through healthy child (HC) and school-based health programmes, on-demand visits for management of acute diseases, scheduled appointments for follow-up of chronic diseases and coordination of care delivery by different providers: nurses, midwives, dentists, physical therapists, psychologists, social workers and family physicians. The time and staff needed to care for patients are limited, so a rational use of resources is necessary to meet the health care needs of the population in general and of patients with SHCNs in particular.

In its report on the Evaluation of the Strategy for the Management of Chronic Illness in the National Health System,⁴ the Spanish Ministry of Health, Consumption and Welfare designated as its main strategic line the promotion of healthy lifestyle habits and primary prevention, which are a key part of the healthy child programme of all primary care centres. Strategic Line 3 emphasises the importance of continuity of care, promoting teamwork and delegation of responsibilities, avoiding duplicate interventions and facilitating the transition between levels of care, while Strategic Line 4 highlights the "reorientation of health care" to the needs of each patient and the delivery of interventions to address those needs, using indicators such as the AMGs used in the study by Barrio et al.² We believe that the time has come to improve the efficiency of our work as professionals in a PCT by implementing some organizational changes.

Does this mean that we should devote our attention to chronic patients to the detriment of other activities, such as prevention programmes or the management of acute disease in primary care centres? Some changes may be needed to integrate the care of patients with SHCNs, such as patients with obesity or ADHD, rather than implementing a health care programme in healthy individuals of any age. One exception to this would be first months of life, during which a greater continuity of care through the healthy child programme is associated with a reduced utilization of services and a lower rate of preventable hospital admission from ages 1–3 years.³ Indeed, in the study conducted by Barrio et al., age less than 5 years was one of the variables that could explain the greatest amount of variance in complexity, so preventive activities in the first year of life are crucial and must be maintained, especially in marginalised areas. Therefore, the healthy child programme cannot be dispensed with, but it could be rescaled and adapted to the needs of the paediatric population to optimise its efficiency.

Another important modification to consider is the scheduling of on-demand visits in offices with very large caseloads in which patients unable to get an appointment may show up at the clinic demanding an urgent visit, often for mild complaints. A large number of these demands could be addressed and resolved with a phone call (prescriptions, test results, questions or concerns, etc) or through emerging communication technologies that allow submission of images from a mobile phone to the paediatrician's office. The current pandemic caused by SARS-CoV-2 and the confinement of the population to their homes has accelerated one of the long-term objectives proposed in the report of the Ministry of Health on the Strategy for the Management of Chronic Illness,⁴ which contemplated the integration of telemedicine and the use of phone calls to

Table 1 Organizational changes in Primary Care Paediatrics^a.

<p>Identification of patients with special health care needs (SHCNs) stratified by level of risk</p> <p>Optimization of the activities of the existing healthy child programme</p> <ul style="list-style-type: none"> – Promote primary prevention activities in the first 2 years of life. – Implement secondary prevention activities in patients with SHCNs such as asthma, obesity, ADHD etc. <p>Promote continuity of care</p> <ul style="list-style-type: none"> – Promote scheduled visits for diagnosis and follow-up of patients with SHCNs. – Follow-up of patients with acute diseases after discharge from hospital. – Collaboration with hospital in the management of patients with complex disease. <p>Incorporation of new technologies</p> <ul style="list-style-type: none"> – Scheduling of phone consultations (prescriptions, test results, questions or concerns) – Telemedicine for the exchange of images and documents between the provider and the patient and/or family.^b – Use of electronic mail for consultations that do not require in-person care. <p>Optimization of the on-demand visit schedule</p> <ul style="list-style-type: none"> – Increase the time devoted to each patient. – Reduce the number of in-person visits through the scheduling of phone consultations. <p>Participation of the paediatric nurse in paediatric care delivery^c</p> <ul style="list-style-type: none"> – On-demand appointments with nurse for follow-up of patients with acute diseases. – Scheduled appointments for health education and follow-up of patients with asthma, obesity, diabetes and other chronic illnesses. – Care coordination appointments with the paediatrician.
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^a To optimise patient-centred care in collaboration with other health care professionals and the health care authorities.

^b In Andalusia, the use of a software application known as Mercurio makes it possible to send text messages with a link that allows patients to submit images or documents during a phone consultation.

^c Activities in addition to vaccination, collection of samples, administration of drugs and others usually performed by outpatient nurses.

replace a large number of visits. Our own experience supports the usefulness of these resources, which succeed in adequately addressing a large number of the reasons why patients seek appointments through these media, allowing health care providers to determine which patients require an in-person visit. This would also allow to reduce the time blocks reserved for on-demand visits, opening more slots for the management of patients that do need care and for scheduled visits.

Another high-priority organizational change is the participation of paediatric nurses in the care of the paediatric population, both in the form of on-demand nursing visits for follow-up of patients with acute diseases and, especially, the management of patients with SHCNs through scheduled nursing visits for health education and follow-up of patients with

asthma, obesity, diabetes and other chronic diseases requiring nursing care and healthy child programme services.

We must make the necessary changes to optimise available resources while maximising efficiency. This requires the involvement of health care authorities, providers and to the extent possible, the population receiving the services. Table 1 presents a summary of the proposed organizational changes.

References

1. Cohen E, Berry JG, Sanders L, Schor EL, Wise PH. Status complexus? The emergence of pediatric complex care. *Pediatrics*. 2018;141 Supplement 3:S202–11.
2. Barrio Cortes J, Suárez Fernández C, Bandeira de Oliveira M, Muñoz Lagos M, Beca Martínez MT, Lozano Hernández C, et al. Enfermedades crónicas en población pediátrica: comorbilidades y uso de servicios en atención primaria. *An Pediatr (Barc)*. 2020;93:183–93.
3. Enlow E, Passarella M, Lorch SA. Continuity of care in infancy and early childhood health outcomes. *Pediatrics*. 2017;140:e20170339.
4. Ministerio de Sanidad, Consumo y Bienestar Social [Accessed 22 May 2020]. Available from: <https://www.mscbs.gob.es/organizacion/sns/planCalidadSNS/pdf/Evaluacion.E...Cronicidad.Final.pdf>, 2019.