

Unnecessary Referrals to Pediatric Immunology Services

Jesús S. Burón-Hernández MD

Immunology is highly specialized and utilized in prophylactic vaccines, laboratory tests and treatments for patient care. It is also an essential tool for cutting-edge biomedical research designed to deepen scientific understanding and produce new therapies and technologies.[1]

At the William Soler Pediatric University Hospital in Havana, as pediatric immunologists, we work to improve our patients' quality of life and enhance their families' confidence and peace of mind. Nevertheless, we too often receive patients—referred by attending pediatricians—who don't require specialized immunology services. In other instances, immunologists are convened to evaluate hospitalized children who do not fit clinical criteria for diseases of the immune system. I consider these unnecessary referrals.

Necessary referrals are when patients fulfill clinical criteria for immune system diseases established by clinical immunological societies and national groups.[2,3] Criteria and guidelines set by these specialized societies include: patients suspected of having primary or secondary immunodeficiencies (PIDs and SIDs), autoimmune diseases or allergic diseases that are difficult to control and manage—such as chronic urticaria, atopic dermatitis or eczema, bronchial asthma, food and medicine allergies, and others. If patients do not fit criteria for diseases of the immune system, they should not be referred to an immunologist but rather to another specialist.

In my personal experience in the hospital's Immunology Department, approximately 80% of patients referred to our service do not fulfill the aforementioned criteria. These patients present with allergic rhinoconjunctivitis and allergies resulting from insect bites that should be treated by an allergist; acute rhinopharyngitis without complications; and other pediatric respiratory infections that should be treated by a pediatrician.

I've attended patients with multiple, simple-to-diagnose diseases including SIDs as a result of prior infections or use of immunosuppressants like steroids, and certain PIDs related to antibody deficiencies, which are easily diagnosed through a clinical exam and by measuring immunoglobulin levels. I've also seen patients with more complicated clinical pictures that are harder to diagnosis, including suspected PID associated with an autoimmune disease and others related to genetic disorders.

Unwarranted referrals are a problem for patients and their families, as well as for doctors. Patient satisfaction can be affected by overloaded specialized services, while the time lost and diagnostic/treatment delay resulting from unnecessary or non-urgent referrals can cause anxiety. Meanwhile, specialists spend time evaluating cases erroneously referred as immunological in source, which interrupts the clinical process and robs time from those patients really needing an immunologist. It is important to add that unnecessary referrals also affect the economy of health systems: once a patient is led to believe their condition is immunological in nature and sees a specialist, they may be sent for complementary analyses that are costly and unwarranted.

The Cuban health system is integrated and comprehensive. Community-based primary care is offered at neighborhood family doctor-and-nurse offices, linked to multispecialty polyclinics responsible for a health catchment area incorporating between 15 and 40 of these offices (20,000–40,000 people, depending on population density).[4] Patients requiring care not available at the primary level are referred to hospitals and institutes comprising secondary and tertiary levels of care. Each polyclinic has a Basic Work Group that includes, among others, an internist, obstetrician-gynecologist and pediatrician; this team attends patients referred for specialist services by their family doctor. If the pediatrician from the Basic Work Group determines a patient needs an immunologist, the youngster is referred to the corresponding pediatric hospital; care moving forward is coordinated between that facility and the polyclinic. Hospitalized children are supposed to be evaluated by their pediatrician before referral to an immunologist as well, but this process isn't observed satisfactorily.

Pediatricians at the polyclinic level may not recognize the clinical manifestations and remission criteria for immunological disorders

I believe several reasons explain why we receive unnecessary immunology remissions. Pediatricians at the polyclinic level may not recognize the clinical manifestations and referral criteria for immunological disorders and there's a tendency to want to

placate parents with a specialist consultation who say their child 'gets sick too often.' Although every Cuban doctor takes pathological anatomy in their second year of medical school where they learn the basics of immunological diseases, complemented by third-year clinical rotations, it's possible the information imparted is insufficient, unclear or too general. What's more, themes related specifically to immunology were only included within the pathological anatomy medical school curriculum after 1985—pediatricians still practicing who graduated prior may not have the information they need.

At our teaching hospital, we impart basic and clinical immunology courses with updated protocols and information, but I'm unsure if this is done systematically for primary care physicians at other pediatric hospitals or medical schools. Since 2013, one program helping update pediatricians and other primary care doctors about immunological diseases is the National Program for Comprehensive Care for Patients with Primary Immunodeficiencies. Training, led by Provincial Immunology Groups, focuses on recognizing PID warning signs at the primary care level; early diagnosis; clinical care; and schooling for patients in isolation.

And yet, unnecessary referrals persist. One recommendation is to clearly and systematically disseminate modifications to diagnostic and referral protocols—developed by the Cuban Immunology Society with the Ministry of Public Health's Primary Care Division—to polyclinics, family doctors and pediatricians. Placing a more specific emphasis on the diagnosis of immune system diseases throughout medical students' clinical rotations

would also help stem unwarranted referrals. Lastly, primary care pediatricians should conduct a preliminary interconsultation with specialists—in this case immunologists—to determine whether diagnostic criteria warrant referral; polyclinic directors should be apprised of specialist interconsultations that go unfulfilled, evaluating the process with the referring physician, as well.

Unnecessary referrals to immunology departments in pediatric hospitals adversely affect the care process, clog services, are time consuming for specialists who need to attend patients who really need them, and contribute to burnout. As a result, immunologists can see fewer patients, while accruing unnecessary costs in confirmatory diagnostic tests. In my opinion, this is an ongoing problem that can be addressed by considering the abovementioned alternatives. Our job is to deliver accurate, timely diagnoses and quality care—we owe it to our children to provide them. 

REFERENCES

1. Alonso Remedios A, Pérez Rumbaut GI, Pérez Martín O. La inmunología en la formación de especialistas en la carrera de Medicina. *Educ Med Super* [Internet]. 2017 Oct–Dec [cited 2021 Mar 15];31(4):1–7. Available at: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21412017000400022&lng=es&nrm=iso&tng=es. Spanish.

2. INFOMED [Internet]. Havana: Ministry of Public Health (CU); c1999-2016. *Inmunología*; [cited 2021 May 19]. Available at: <http://especialidades.sld.cu/inmunologia/>. Spanish.
3. Macías Abraham C. Una mirada al diagnóstico y tratamiento de las inmunodeficiencias primarias en Cuba. *Rev Cubana Hematol Inmunol Hemoter* [Internet]. 2019 [cited 2021 May 27];35(4). Available at: <http://www.revhematologia.sld.cu/index.php/hih/article/view/1178/1040>. Spanish.
4. Aguilar T, Reed G. Mobilizing primary health care: Cuba's powerful weapon against COVID-19. *MEDICC Rev* [Internet]. 2020 Apr [cited 2021 May 19];22(2):53–7. Available at: <http://mediccreview.org/mobilizing-primary-health-care:-cuba-s-powerful-weapon-against-covid-19>

THE AUTHOR

Jesús Salím Burón-Hernández (jsalimbh@gmail.com), physician specializing in immunology. Assistant professor and adjunct researcher, Allergy and Immunology Department, William Soler Pediatric University Hospital, Havana, Cuba. <https://orcid.org/0000-0002-4387-5021>

Submitted: April 30, 2021

Approved for publication: June 10, 2021

Disclosures: None
