analesdepediatría

www.analesdepediatria.org

EDITORIAL

The grey zone of influenza vaccination: children with risk conditions still lack their own data

La zona gris de la vacunación antigripal: los niños con condiciones de riesgo siguen sin datos propios

Itziar Iturralde Orive[a,b,*], Javier Álvarez Aldean[c], Ana Mª Grande-Tejada[d,e], Fernando Moraga LLop[e]

[a] *Servicio de Pediatría, Hospital Universitario de Cruces, Bizkaia, Spain*
[b] *Comité Asesor de Vacunas Euskadi, Bizkaia, Spain*
[c] *Pediatra, Málaga, Spain*
[d] *Hospital Materno Infantil Badajoz, Badajoz, Spain*
[e] *Asociación Española de Vacunología, Spain*

Received 8 July 2026; accepted 13 July 2026

Each season, the Advisory Committee on Vaccines and Immunizations of the Spanish Association of Pediatrics (CAV-AEP) updates its recommendations on vaccination against influenza based on a rigorous review of the available evidence. The latest report, from April 30, 2026, confirms a trend worth celebrating, without falling into complacency: the mean coverage in the population aged 1–5 years reached 52.3% in the 2025–2026 season, compared to 37.2% in the 2023–2024 season, which was the first in which universal vaccination against influenza in this age group was funded by the public health system in every autonomous community (AC) in Spain.[1] These figures are growing in the right direction, although they are still far from the target established for any other vaccine included in the routine immunization schedule.

Still, despite this progress, a gap remains, season after season: there are no specific data on influenza vaccination coverage in children with risk conditions. We do not have this information because we lack the systems required to record these data accurately, and this lack is, in itself, one of the barriers hindering the development of effective strategies to target a population whose epidemiological circumstances we remain largely ignorant of.

Moraga-Llop and Salamanca de la Cueva already noted that the achieved coverage was disappointing compared to other vaccinations administered in the first years of life included in the routine schedule, highlighting persistent structural barriers.[2] Their editorial put the diagnosis on the table. In this text, we aim to go one step further, identifying the specific subgroup that is most severely affected by this gap from a clinical standpoint, analyzing why we continue to lack specific data on these patients, and proposing hierarchized pragmatic solutions for the upcoming season.

DOI of original article:
https://doi.org/10.1016/j.anpedi.2026.504339
* Corresponding author.
E-mail address: itziar.iturraldeorive@osakidetza.eus (I.I. Orive).

2341-2879/© 2026 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/).

A well-defined gray area

Children with risk conditions are, by default, the group in which vaccination against influenza has the greatest individual impact. Theoretically, their identification should not pose a challenge, since the CAV-AEP itself details all the conditions associated with an increased risk of influenza infection in its table of recommendations for the 2026–2027 season.[3] Yet, in real-world practice, current surveillance systems are unable to identify them.

The Vaccination Information System of the Ministry of Health of Spain (SIVAMIN) reports vaccination coverage in children aged 1–5 years as if they were a homogeneous group, without stratifying data by underlying condition.[1] Published case series estimate coverages in children with risk conditions as ranging between 15% and 25%, but, in the best of cases, these are partial approximations: the very heterogeneity of this population introduces significant bias in any global figure. There is no unified nationwide register, nor a methodology standardized by consensus, nor, when it comes down to it, a reliable denominator.

This gap has three root causes that are mutually reinforcing. The first involves the challenges of case ascertainment: children with risk conditions are difficult to identify from an administrative standpoint. Their clinical characteristics are heterogeneous, their condition fluctuates over time—and is often modified by treatments themselves—and the diagnostic coding schemes (International Classification of Primary Care, second edition [ICPC-2] at the primary care level, International Classification of Disease, 11th revision [ICD-11] in hospital settings) may vary between care levels. The second cause is health care fragmentation: the primary care team knows about its own chronic patients but may not be aware of patients exclusively managed in hospital settings, and in hospital settings, there is rarely a system alerting specialists of the need to vaccinate a specific patient. The third cause, which derives from the first two, is the lack of specific indicators: neither the Ministry of Health nor the regional authorities of the ACs have established specific vaccination coverage targets for pediatric risk groups. Without a target, there is no pressure to improve; without measurement, there is no way to define areas of intervention.

Why this disparity matters in pediatric vaccination against influenza

The clinical relevance of this situation is unquestionable. In the pediatric population, severe influenza is more likely to occur in patients with underlying conditions, in whom the probability of hospital admission, complications, decompensation of underlying disease and even death is substantially greater. A study conducted in Spain showed that up to 45% of children hospitalized due to influenza had a risk condition that was an indication for vaccination, and that up to 74% of them were not vaccinated.[3] In light of this evidence, the coverage estimates of 15%–25% represent a clear failure on the part of our prevention system, which is particularly inexcusable if we take into account that vaccination for the population with risk conditions aged less than 18 years has been funded by the public system for years. This priority should not be diluted in the implementation of universal vaccination in different pediatric age groups, and the proposal to extend routine vaccination through age 17 years provides an additional opportunity to increase coverage in at-risk groups.[4]

High-impact strategies for a specific subgroup

The general strategies outlined by the CAV-AEP and the AEV-CAV-SEIP consensus to improve pediatric vaccination can and must be adapted and prioritized for this subgroup.[4] We present seven lines of action in order of potential impact:

1. The first and most pressing is to resolve the case ascertainment problem by creating personally identifiable patient registries at the beginning of the season that can be updated and shared between primary care and hospital settings, accompanied by alerts in the electronic health records system that get activated in any contact with an at-risk patient that has yet to be vaccinated. Similar experiences with active surveillance, for instance, in the context of programs for immunization against respiratory syncytial virus with nirsevimab, have demonstrated the potential of this organizational model.[5]
2. The second is the active recommendation and shared responsibility of health care providers: there is robust evidence that explicit recommendation by a physician, nurse, or pharmacist is pivotal in the decision to vaccinate, and the message has to be uniform, clear, and consistent between pediatricians and nurses.
3. The third is structured training and the alignment of health care professionals, scientific societies, health authorities and patient associations to ensure that the general public perceives a united front, as opposed to differences of opinion between the actors at play.
4. The fourth is the involvement of community pharmacies, which maintain regular contact with patients with chronic conditions through the dispensing of their regular medications and can play an active role in recommending vaccination.
5. The fifth is issuing reminders to families, the quantifiable intervention with the greatest impact on improving coverage in vaccination against influenza described in the literature,[3] an intervention that is particularly feasible in chronic patients with frequent and documented contact with the health care system.
6. The sixth is improving accessibility and acceptability: school-based vaccination, walk-in appointments, weekend hours, extended hours, or inclusion in hospital discharge protocols. The availability of the intranasal vaccine, authorized in Spain for the entire population aged 2–17 years (except in specific cases of severe immunosuppression) also eliminates a common barrier in pediatric care, as it is a vaccine that is well accepted by patients and health care professionals. There is no justification for not vaccinating those for whom this route is contraindicated, given that alternatives are available.
7. Finally, the seventh line of action is to close the loop by systematically communicating results to professionals and the public, a necessary condition for sustaining any continuous improvement strategy.

A road map at different levels

These interventions are feasible because, for the most part, they are adaptations of tools that are already available. Their implementation requires simultaneous action on three levels. At the clinical level, pediatricians and nurses must actively identify at-risk patients and include vaccination as an explicit recommendation in annual follow-ups. At the organizational level, health centers must develop active registries, electronic alerts, and protocols for coordination across care levels, as well as formal agreements with community pharmacies. At the public health level, the autonomous communities and the Ministry of Health must create specific coverage indicators for this subgroup, set differentiated targets, and incorporate them into existing vaccination registries.

Conclusions

In Spain, there has been progress in pediatric vaccination against influenza, which is now included in the routine immunization schedule—an achievement that deserves recognition. However, moving forward without knowing the status of the most vulnerable pediatric subgroup (children with risk conditions) is a flaw that must be corrected. The combination of inadequate case ascertainment, unstratified surveillance, and absence of specific targets creates a gray area in which the children most likely to benefit from vaccination are, paradoxically, the ones least likely to receive it.

The tools required to correct this already exist, and the strategies that work are well documented.

All that is left to do is to apply this knowledge with deliberate focus and a firm will, institutional leadership, and a measurable commitment to improvement. It now falls to the professionals managing these patients, scientific societies, community pharmacies, health authorities, and patient associations to act together, without further delay. The next season begins in October. The time to act is now.

Declaration of Generative AI and AI-assisted technologies in the writing process

No artificial intelligence was used in the preparation of this article.

Funding

This research did not receive any external funding.

References

1. Ministerio de Sanidad. Portal Estadístico. SIVAMIN [Internet]. Available from: https://www.sanidad.gob.es/estadEstudios/estadisticas/sisInfSanSNS/sivamin.htm.
2. Moraga-Llop F, Salamanca de la Cueva I. Ni estando en el calendario: reflexiones sobre el fracaso de la cobertura de vacunación antigripal en Pediatría. Pediatr Integral. 2024;XXVIII(8):484–5.
3. Comité Asesor de Vacunas e Inmunizaciones de la AEP (CAV-AEP). Vacunación frente a la gripe estacional en la infancia y la adolescencia. Recomendaciones 2026-2027. AEP [Internet]. Abril 2026.
4. Álvarez Aldeán J, Álvarez García FJ, Cruz Cañete M, Fernández Prada M, Francisco González L, Grande Tejada AM, et al., en representación del CAV-AEP, SEIP y AEV. Vacunación antigripal en la infancia y la adolescencia. Consenso AEV, CAV-AEP y SEIP. An Pediatr(Barc). 2025;103:503965.
5. Núñez O, Olmedo C, Moreno-Perez D, Lorusso N, Fernández Martínez S, Pastor Villalba PE, et al., Nirsevimab Effectiveness Study Collaborators. Effectiveness of catch-up and at-birth nirsevimab immunisation against RSV hospital admission in the first year of life: a population-based case-control study, Spain, 2023/24 season. Euro Surveill. 2025;30(5):2400596.