

Developing a Latin American Delphi Consensus on Vaccination for Respiratory Diseases in Older Adults

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Background: Respiratory infections significantly impact older adults in Latin America, highlighting the need for regionally adapted consensus-based vaccination recommendations to guide preventive strategies. This study aimed to develop a consensus among Latin American experts on vaccination against respiratory diseases in older adults in the region, including influenza, *Streptococcus pneumoniae* pneumonia, coronavirus disease 2019 (COVID-19), respiratory syncytial virus (RSV), and pertussis. **Methods:** A two-round Delphi methodology was employed, involving 35 specialists from various medical fields. A rapid evidence review was conducted using scientific databases and clinical practice guideline repositories. Participants evaluated each recommendation on a 1-to-5 scale; recommendations with 80% acceptance (score of 4 or higher) were approved. **Results:** The consensus resulted in recommendations for administering Tdap (tetanus, diphtheria, and pertussis) boosters every 10 years for pertussis and annual influenza vaccination in adults aged 65 years or older, using high-dose or adjuvanted formulations. Additionally, primary and annual booster COVID-19 vaccinations were recommended, along with a single dose of RSV vaccine for individuals aged 75 years and older, providing protection for at least two winter seasons. Routine administration of pneumococcal conjugate vaccine 15 (PCV15) or PCV20 was also recommended for adults aged 65 years or older who had not previously received a PCV. **Conclusions:** The consensus provides a vaccination guide tailored to the Latin American context, aiming to bridge gaps in vaccination coverage among older adults in the region. This effort seeks to reduce the burden of respiratory diseases on frail healthcare systems and promote healthy aging in Latin America.

Key Words: Human influenza, COVID-19, Respiratory syncytial viruses, Whooping cough, Delphi technique, Vaccines

INTRODUCTION

Respiratory infections are among the leading causes of morbidity, acute functional decline, and mortality in older adults worldwide. In Latin America and the Caribbean (LAC), the situation is even more critical, as the region faces a high prevalence of respiratory diseases such as those caused by influenza, respiratory syncytial virus (RSV), *Bordetella pertussis*, and coronavirus disease 2019 (COVID-19), which disproportionately affect this vulnerable population.¹⁻³⁾ Unlike children, older adults constitute a highly heterogeneous population in terms of immune function, comorbidities, physiological reserves, functional capacity, and socioeconomic context—all of which condition vaccine effectiveness, access, and acceptance.^{4,5)} Mechanisms such as immunosenescence and inflammaging cause varied immune responses, meaning that some individuals over 65 exhibit robust antibody and cellular responses while others respond poorly even to high-dose vaccines.⁶⁾ These disparities are further amplified in Latin America due to structural factors like fragmented healthcare systems, rural access barriers, and socioeconomic inequality.^{7,8)} This underscores the importance of region-specific recommendations to effectively tailor immunization strategies for older adults in the region.

Specifically, influenza causes more than 36,500 respiratory deaths and 400,000 hospitalizations annually in LAC.⁹⁻¹¹⁾ RSV also has a significant impact, with reports showing it leads to a high percentage of hospitalizations among older adults in LAC, a problem that remains underestimated in this population.¹²⁾ In LAC, invasive pneumococcal disease in adults aged ≥ 65 years is estimated at 8.8 per 100,000 person-years and is associated with approximately 28,000 deaths and approximately 182,000 hospitalizations each year, indicating persistent risk despite pediatric pneumococcal conjugate vaccine (PCV) programs.¹³⁾ For COVID-19, older adults carry the highest burden: in the Region of the Americas, people aged ≥ 70 years account for a substantial share of cumulative deaths; Brazilian cohorts report in-hospital fatality rates often exceeding 20% with a clear age gradient; and the United States COVID-NET Surveillance (October 2023–April 2024) shows that adults aged ≥ 65 years accounted for about 70% of adult hospitalizations, with the highest rates in those aged ≥ 75 years.¹⁴⁻¹⁶⁾ For pertussis, regional surveillance reports 43,751 cases in 2024 with further increases in 2025, highlighting immunity gaps that can affect older-age contacts.¹⁷⁾ The older adult population in the region is rapidly increasing, and it is projected that the percentage of people aged 60 and older in LAC will rise from 12% to 20% by 2050, further increasing the demand for healthcare services tailored to this demographic.^{18,19)}

Vaccines, therefore, represent a critical tool for reducing the risk

of hospitalization and mortality associated with these infections.²⁰⁻²²⁾ Despite the known benefits of vaccination in older adults, significant gaps exist in the literature regarding the effective implementation of these measures in LAC. Although some countries have adopted influenza vaccination policies, coverage remains insufficient, reaching just 40% in some countries, far below the 75% recommended by the World Health Organization (WHO).²³⁾ Furthermore, there is limited clarity about the booster doses required for COVID-19 and RSV, as well as the safety and efficacy of coadministering these vaccines.^{1,18)} Variability in healthcare systems and vaccine access across Latin American countries also poses a major limitation, leaving a significant proportion of older adults unprotected against severe respiratory diseases.^{2,14)}

The heterogeneity of healthcare systems in LAC presents challenges to implementing effective vaccination programs. In many countries, older adults face significant barriers to accessing vaccination services, exacerbated by fragmented healthcare systems and limited resources in rural and low-income areas.^{3,24,25)} Previous studies highlight the need to develop a regional consensus to establish clear recommendations tailored to the socioeconomic and epidemiological context of LAC.^{20,26,27)}

In this context, the primary objective of this study was to formulate a consensus among LAC experts to establish specific recommendations tailored to regional conditions for vaccinating older adults against pertussis, COVID-19, influenza, pneumococcus, and RSV.¹⁹⁾ A secondary objective was for the consensus to promote a more equitable and sustainable approach to preventing these diseases in older adults and to provide a practical and robust foundation for actions aimed at increasing vaccination coverage for these diseases in the region.²³⁾

MATERIALS AND METHODS

Study Design

This study utilized a modified Delphi (e-Delphi) methodology with two rounds of electronic surveys to gather expert input and achieve consensus on solutions to complex problems. This approach synthesizes insights from specialists to address specific issues effectively. This study was conducted using a two-round Delphi consensus, focusing on the adoption of vaccination recommendations for older adults in LAC. The Delphi methodology was chosen for its effectiveness in building consensus on public health and vaccination topics in vulnerable populations.^{12,28)}

In the first round, which took place between July 23, 2024, and August 13, 2024, 35 participating experts were asked to evaluate each recommendation on a scale from 1 to 5, with 1 being the lowest score and 5 the highest. Access to the data was obtained imme-

diately after the conclusion of the first round on August 13, 2024. Recommendations were considered accepted when at least 80% of the experts scored them with a 4 or 5. This threshold was selected based on previous Delphi-based studies that use 70%–80% as acceptable consensus levels, depending on the topic and required rigor of agreement. A stricter threshold was chosen due to the public health relevance of the recommendations.^{29,30} Recommendations that did not meet this threshold proceeded to a second round, which took place between August 24, 2024, and September 4, 2024. Access to the second-round data was obtained immediately after its conclusion on September 4, 2024.

Selection of Participants

Geriatricians who are members of the Academia Latinoamericana de Medicina del Adulto Mayor (ALMA), a non-profit organization established in 2002 to enhance healthcare for older adults in the region, were invited to participate.^{12,31} In addition, infectious disease specialists, pulmonologists, pediatricians, and immunologists recommended by ALMA geriatricians were also invited.

Participants were selected based on their expertise, professional reputation, and involvement in research or clinical practice related to vaccination, immunization, and geriatrics. Ideal participants were those who had published peer-reviewed research papers in these fields within the past 5 years or possessed a minimum of 10 years of experience. To ensure diverse perspectives and comprehensive representation, the panel included clinicians, academic researchers, and educators with specific expertise in vaccination, immunization, and geriatrics. This approach aimed to reflect the broad range of knowledge required to address the complex challenges associated with immunization in older adults.

Search Strategy and Development of Statements

To establish the recommendations and statements, a rapid evidence review was conducted in PubMed and Scopus, covering all records from inception to May 18, 2024, and including results published in English, Spanish and Portuguese. We searched using a prespecified strategy that combined terms for older adults, vaccination, the five target pathogens (influenza, *Streptococcus pneumoniae*, COVID-19, RSV, pertussis), and guidance document types (guideline, recommendation, consensus, position statement, technical report).^{28,31,32} We included documents with explicit immunization recommendations for adults aged 60 years or older, or for risk groups that include older adults, relevant to LAC or international guidance applicable to the region. We excluded records without explicit recommendations, those outside the five target diseases, pediatric-only documents, and duplicates. This process resulted in a list of 20 statements, distributed across the five diseases.

An open-ended question was also included to allow experts to provide observations and feedback. Participants had 3 weeks to respond to the first round and 2 weeks to complete the second round, with weekly reminders sent to improve the response rate. The survey was conducted in Spanish.

Additionally, well-known clinical practice guideline repositories were consulted, such as Trip Database, Canadian Medical Association Infobase, EGuidelines, the Guidelines International Network (G-I-N), the National Guideline Clearinghouse, and the National Health and Medical Research Council (NHMRC). Guidelines from organizations such as the National Institute for Health and Care Excellence (NICE), Mexico's National Center for Health Technology Excellence (Centro Nacional de Excelencia Tecnológica en Salud, CENETEC), GuíaSalud, and Colombia's Ministry of Health and Social Protection (MINSALUD) were also considered.^{12,33,34} Furthermore, documents with similar characteristics from portals of the WHO, the Pan American Health Organization (PAHO), and geriatric and gerontology-related organizations, such as the Spanish Society of Geriatrics and Gerontology and the International Federation on Ageing (IFA), were included.

Delphi Rounds

The Delphi consensus consisted of two rounds aimed at reaching an agreement on vaccination recommendations for older adults. In the first round, which took place between July 23, 2024, and August 13, 2024, 35 participating experts were asked to evaluate each recommendation on a scale from 1 to 5, with 1 being the lowest score and 5 the highest. Recommendations were considered accepted if they received a score of 4 or higher from at least 80% of the evaluators. Recommendations that did not meet this threshold proceeded to a second round, which took place between August 24, 2024, and September 4, 2024, where the same criterion of 80% of evaluators assigning a score of 4 or 5 was applied for final acceptance.^{29,30,35}

Survey instrument

For each statement, panelists rated their level of agreement using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). An open-ended comment box invited suggestions on clarity, scope, feasibility of implementation, risk-group wording, and alignment with the cited evidence. Consensus was predefined as $\geq 80\%$ of ratings at 4 or 5. Items not reaching consensus in Round 1 were revised based on comments and rerated in Round 2 using the same threshold. The expert panel primarily consisted of geriatricians, infectious disease specialists, pulmonologists, pediatricians, and immunologists, as these professionals are the most knowledgeable in immu-

nizations. Full score distributions by round are presented in [Supplementary Tables S1](#) and [S2](#).

Demographic and Academic Variables

In addition to evaluating the recommendations, the experts were asked to provide information about their medical specialty and academic degrees. The variables included: (1) medical specialty, (2) whether they held a master's or doctoral degree and the field of that degree, and (3) whether they were involved in university teaching. This information enabled a better characterization of the profile of the participating experts and allowed for an assessment of the diversity of perspectives within the consensus.^{31,33,34)}

Ethical Approval

All experts who participated in the Delphi consensus provided informed consent for the use of their opinions in the development of this manuscript. The project was registered with the Dirección General de Investigación, Desarrollo e Innovación of the Universidad Científica del Sur under the registration code PI-15-2024-0501 and was granted an exemption from ethical approval.

RESULTS

Participant Characteristics

The Delphi consensus included 35 specialists from various related medical fields, distributed as follows: 18 geriatricians, 6 infectious disease specialists, 6 pulmonologists, 1 family physician, 1 otolaryngologist, 1 pediatric vaccine expert, and 2 pediatric immunologists. Among the participants, 18 held a master's degree, and 5 had a doctoral degree. Additionally, 30 of the specialists reported being engaged in university teaching. Similarly, 7 specialists were from Peru, while 5 were from Brazil and Mexico, respectively ([Table 1](#)).

Recommendations Accepted in the Second Round

In the second round of the Delphi consensus, recommendations for each disease met the prespecified consensus threshold ($\geq 80\%$ of ratings at 4 or 5 on a 1–5 scale). Of the 20 statements evaluated in Round 1, 15 reached consensus, 2 were removed as redundant, and 3 were revised and then reached consensus in Round 2, yielding 18 final accepted recommendations ([Fig. 1](#)). The disposition of all statements across rounds is shown in [Supplementary Table S3](#), and the full score distributions for each statement in Rounds 1 and 2 are provided in [Supplementary Tables S1](#) and [S2](#), respectively. In addition, the evidence selection flow is summarized in the flowchart in [Supplementary Fig. S1](#).

Table 1. Characteristics of participants in the Delphi consensus

Characteristic	n (%)
Sex	
Male	26 (74.3)
Female	9 (25.7)
Medical specialty	
Geriatrics	18 (51.4)
Infectious diseases	6 (17.1)
Pulmonology	6 (17.1)
Family medicine	1 (2.9)
Otolaryngology	1 (2.9)
Pediatrics and immunology	3 (8.6)
University teaching	
No	5 (14.3)
Yes	30 (85.7)
Holds a master's degree	
No	17 (48.6)
Yes	18 (51.4)
Holds a doctorate	
No	30 (85.7)
Yes	5 (14.3)
Country	
Argentina	2 (5.7)
Bolivia	2 (5.7)
Brazil	5 (14.3)
Chile	2 (5.7)
Colombia	4 (11.4)
Costa Rica	1 (2.9)
Cuba	1 (2.9)
Ecuador	4 (11.4)
Mexico	5 (14.3)
Paraguay	1 (2.9)
Peru	7 (20)
Uruguay	1 (2.9)

Percentages may not total exactly 100 due to rounding.

Pertussis (Whooping cough)

It was recommended that adults receive a Tdap (tetanus, diphtheria, and pertussis) or Td (tetanus and diphtheria) booster every 10 years to maintain adequate immunity levels. For older adults aged 65 and over, a Tdap dose was recommended if they had not received one in the past 10 years, given the higher morbidity associated with pertussis in this age group ([Table 2](#)).

COVID-19 primary series and boosters

For the primary series, a single dose of any available monovalent vaccines (Moderna, Pfizer-BioNTech, or Novavax) was recommended to ensure coverage against the Omicron XBB.1.5 variant. In cases of severe immunocompromise, a regimen of two primary

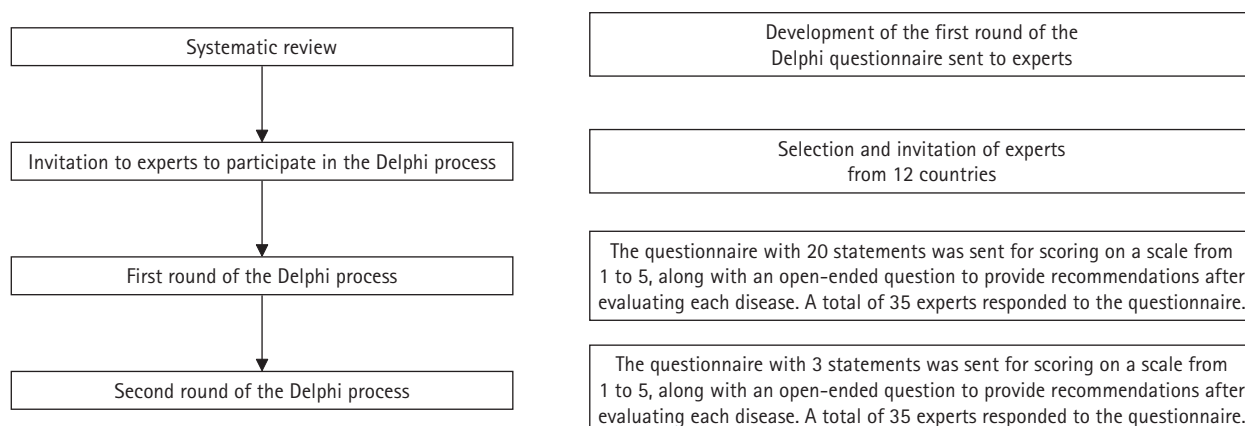


Fig. 1. Flowchart of the process and methodology.

Table 2. Recommendations derived from expert consensus using the Delphi methodology

	Recommendation statement
Pertussis (Whooping cough)	1. Adults are recommended to receive a Tdap (tetanus, diphtheria, and pertussis) or Td (tetanus and diphtheria) booster every 10 years. 2. Adults aged 65 and older are recommended to receive a dose of Tdap if they have not had one in the past 10 years, due to the increased morbidity associated with pertussis in older adults.
COVID-19 primary series recommendations	1. A single primary dose of any monovalent vaccines, including Moderna (Spikevax) Monovalent, Pfizer-BioNTech (Comirnaty) Monovalent, or Novavax (Nuvaxovid), is recommended to provide coverage against the Omicron variant XBB.1.5. 2. For individuals with severe immunocompromise, a primary series of two doses followed by a third dose is recommended, based on an individualized risk-benefit assessment.
COVID-19 booster recommendations	1. A booster dose is recommended every 12 months for adults aged 65 to 74. However, those with additional risk factors, such as significant comorbidities or high exposure to risky environments, may be eligible for a booster every 6 months following an individualized risk-benefit evaluation. 2. For adults aged 60 to 64, a booster dose is recommended every 12 months, based on a risk-benefit assessment with their immunization provider.
Respiratory syncytial virus (RSV)	1. A vaccine against RSV is recommended for all adults aged 75 and older. 2. RSV vaccination is recommended for adults aged 60 to 74 at increased risk for severe RSV disease. 3. The RSV vaccine is not an annual vaccine; a single dose provides protection for at least two winter seasons. 4. Adults aged 60 and older should have the option to receive a single dose of the RSV vaccine, based on discussions with their health-care provider. 5. The RSV vaccine can be coadministered with other vaccines, such as the influenza vaccine and COVID-19 vaccines (Pfizer-BioNTech, Moderna), without affecting efficacy or increasing side effects. This coadministration is safe and effective, improving immunological coverage in at-risk populations.
Influenza	1. Influenza vaccination is especially important for individuals aged 65 and older due to their higher risk of severe complications from influenza. 2. A high-dose or adjuvanted vaccine (Fluzone High-Dose Quadrivalent, Flublok Quadrivalent, or Fludac Quadrivalent) is recommended. 3. Annual influenza vaccination is recommended for adults aged 65 and older.
Pneumococcal pneumonia	1. Routine administration of the pneumococcal conjugate vaccine (PCV15 or PCV20) is recommended for all adults aged 65 and older who have never received a PCV. 2. If PCV15 is used, it should be followed by a dose of PPSV23 1 year later. 3. Pneumococcal vaccination with PCV13, followed by a dose of PPSV23 1 year later, is recommended for adults aged 70 and older. 4. Pneumococcal vaccination is recommended for adults aged 50 and older in Indigenous communities and other high-risk groups.

This table lists only the 18 accepted recommendations. The full disposition of all 20 statements across rounds (including removed items) appears in Supplementary Table S3.

doses plus an additional third dose was recommended (Table 2).

Regarding boosters, an annual dose was recommended for adults aged 65–74. For those with additional risk factors or high exposure to risky environments, a booster every 6 months was advised. For adults aged 60–64, an annual booster was suggested based on an individualized risk-benefit assessment (Table 2).

Respiratory syncytial virus

A single dose of RSV vaccine was recommended for all older adults aged 75 and older, as well as for those aged 60–74 who are at increased risk of severe RSV disease. The vaccine was specified as non-annual, providing protection for at least two winter seasons. Additionally, coadministration of the RSV vaccine with other vaccines, such as influenza and COVID-19, was approved, demonstrating its safety and efficacy (Table 2).

Influenza

The importance of annual influenza vaccination for older adults aged 65 and older was reaffirmed. High-dose or adjuvanted formulations (Fluzone High-Dose Quadrivalent, Flublok Quadrivalent, or Fludac Quadrivalent) were recommended due to the increased risk of severe complications in this population (Table 2).

Pneumococcal pneumonia

Routine vaccination with PCV15 or PCV20 was recommended for all adults aged 65 and older who have not previously received a PCV. If PCV15 is used, a schedule including a dose of 23-valent pneumococcal polysaccharide vaccine (PPSV23) 1 year later was advised. Vaccination was also suggested for adults aged 50 and older in indigenous communities and other high-risk groups (Table 2).

Synthesis of Open-Ended Panel Feedback

We received 71 open-ended comments. Most focused on dosing and timing and on eligibility criteria; fewer raised implementation points. By disease, for COVID-19 ($n = 12$), panelists asked for clearer intervals, separating the primary series from booster doses. For RSV ($n = 6$), they asked to spell out eligibility by age and noted that it is not an annual vaccine. For pneumococcal disease ($n = 15$), they requested concise guidance on sequencing and schedules and brief notes for high-risk groups. For influenza ($n = 5$), the emphasis was on risk-based eligibility and annual vaccination for adults 65 years and older. For pertussis ($n = 3$), they supported boosters every 10 years and a one-time Tdap for those without prior receipt. Cross-cutting feedback ($n = 30$) asked for consistent terminology, short examples of risk factors, and alignment with national calendars.

DISCUSSION

Comparison with Previous Studies

Our findings on vaccination recommendations for older adults in LAC are consistent with evidence showing that immunization reduces respiratory disease incidence and severity, functional decline, and healthcare costs in this population. Prior work in LAC underscores influenza's substantial burden, including mortality and hospitalizations in older adults, and supports the use of high-dose or adjuvanted formulations in adults aged ≥ 65 years.²⁸ Our consensus aligns with this literature and with guidance permitting coadministration when indicated.^{36,37}

Our consensus is aligned with major guidance for older adults.^{36,37} For tetanus–diphtheria–pertussis, it is consistent with adult schedules that include a one-time Tdap followed by decennial boosters.³⁸ Our pneumococcal statements align with the Advisory Committee on Immunization Practices (ACIP) adult recommendations,³⁹ while acknowledging subsequent United States updates that expand PCV eligibility to adults aged ≥ 50 years.⁴⁰ To aid implementation in LAC, we prioritize coverage while working toward alignment with current recommendations and identify higher-risk adults—e.g., those with immunocompromise, cerebrospinal fluid leak or cochlear implant, major chronic comorbidities, current smoking, residence in long-term care or other congregate settings, and Indigenous or remote communities with higher disease burden.^{38,39}

For RSV, our single-dose approach in older adults is consistent with updated recommendations and CDC clinical guidance.^{41,42}

Influenza, COVID-19, and RSV vaccines can be administered at the same visit, using separate injection sites and with no minimum interval between them.^{36,37,41,42} In Latin America, influenza seasonality varies—winter peaks in Southern Cone settings and multi-peak or near year-round circulation in tropical areas—so vaccination should be scheduled ahead of the expected local peak or during national campaigns, with coadministration when it facilitates uptake.^{9,28}

Regarding pertussis, Choi et al.³¹ and Hozbor et al.³³ have identified a resurgence of this disease in older adults, partly attributed to waning immunity over time and low booster coverage in adults. These studies underscore the need for periodic Tdap boosters in adults, particularly those with comorbidities. Our consensus reinforces this recommendation, advocating for Tdap administration every 10 years, especially in adults aged 65 and older, reflecting a strategy aligned with international practices.

Two context-specific COVID-19 points may guide implementation. First, for adults aged 65–74 years, we favored an annual booster with an optional 6-month dose for higher-risk individuals;

later, ACIP recommended two 2024–2025 doses for adults aged ≥ 65 years.^{43–45} Second, after SARS-CoV-2 infection, vaccination need not be delayed; individuals may consider waiting 3 months from symptom onset or from the first positive test if asymptomatic. Individualized decisions—especially for adults aged 65–74 years—should weigh multimorbidity and frailty, immunocompromise, exposure risk, interval since last vaccine or infection, and local circulation.^{43–45}

In our Delphi process, three statements (COVID-19 wording on “primary” vs “booster” doses; booster frequency for adults 65–74 with examples of risk factors; and RSV coadministration phrasing aligned with clinical guidance) were revised after Round 1 and subsequently reached consensus in Round 2.^{40–42} Two additional COVID-19 items were removed as redundant in Round 1.

Relevance of Findings in Public Health

The implementation of appropriate vaccination programs for older adults is critical in LAC, where healthcare systems face a significant burden of respiratory diseases. The PAHO and the WHO have emphasized the importance of increasing vaccination coverage in this group to reduce hospitalizations and deaths, thereby contributing to the sustainability of healthcare systems.^{46–48}

A previous study highlights that the significant fragmentation and segmentation of Latin American healthcare systems, combined with the lack of stable funding, hinder the effective implementation of immunization strategies for older adults, particularly in rural and low-income areas.⁴⁹ In this context, general recommendations on vaccination strategies for older adults—such as modified doses, multivalent/adjuvanted formulations, consideration of chronic diseases, multimorbidity, frailty, and adapting strategies to different levels of care—would not suffice when accounting for the heterogeneity of healthcare systems in the region.⁵

Moreover, the aging population in LAC, with projections indicating that the percentage of older adults aged 60 and over will double by 2050, highlights the importance of public health planning that incorporates vaccination as a fundamental component.^{49,50} Vaccination programs against influenza, pneumococcus, COVID-19, and RSV in older adults are not only an individual preventive measure but are also essential for reducing the burden on healthcare systems already operating at full capacity and facing significant financial challenges. Studies, such as that by Atun et al.,⁴⁷ suggest that the economic benefits of these programs are substantial, reducing hospital costs and the burden of comorbidities in this population. The disability that often arises in older adults following vaccine-preventable diseases increases the caregiving burden, which is typically shouldered by families in LAC.

The approach adopted in this study highlights the need for vaccination policies tailored to the region's needs and supported by sustained financial commitments. This is crucial for preventing severe and costly complications associated with respiratory diseases in older adults, thereby improving the quality of life for this population and promoting healthy, functional aging.^{7,50} Vaccination in older adults is recommended as part of a comprehensive package of interventions aimed at optimizing intrinsic capacity and functional ability, enabling well-being in old age. Healthcare professionals, policymakers, communities, and, most importantly, users and caregivers, are key stakeholders in optimizing coverage and ensuring the success of vaccination programs.

Limitations and Strengths

A limitation of this study lies in the Delphi methodology, which, although effective in achieving consensus, may introduce biases by not including all decision-makers from the region, thereby limiting the diversity of perspectives.^{7,49,50}

Another limitation is the heterogeneity in the healthcare infrastructure across LAC, which could hinder the uniform implementation of the proposed recommendations, given the significant variation in resources and implementation capacity among countries.^{46,47}

However, this study also has several strengths. The inclusion of experts from multiple disciplines provides a comprehensive approach.^{7,49,50} This study is particularly relevant due to the creation of a consensus specifically adapted for LAC, offering a framework that could guide future public health policies and programs in the region. By providing evidence-based recommendations for vaccination in older adults, this first consensus represents an excellent opportunity to adapt and implement recommendations aimed at increasing vaccination coverage and reducing the incidence and mortality associated with respiratory diseases in this vulnerable population.^{7,49,50}

A notable limitation is the lack of studies in the region that incorporate stratification by functional status, frailty, and specific serotypes. This gap hinders a more precise evaluation of immunization outcomes in older adults, particularly in populations with diverse levels of vulnerability. Future research should prioritize addressing these gaps by including stratified analyses based on frailty, functional capacity, and serotype-specific data. Such studies would provide a deeper understanding of vaccine efficacy, safety, and long-term outcomes in older adults, allowing for tailored immunization strategies that better align with the heterogeneity of this population. Our scope was restricted to adult respiratory vaccines (influenza, COVID-19, RSV, pneumococcal, pertussis); other age-relevant vaccines (e.g., zoster, hepatitis B) were outside the

scope of this work. Strengthening regional data in these areas is essential to optimize vaccination policies and improve health outcomes in older adults across Latin America.

Conclusion

This study presents the first expert consensus on vaccination strategies for older adults in LAC, offering tailored, evidence-based recommendations to address key respiratory diseases: pertussis, COVID-19, influenza, pneumococcus, and RSV. These strategies aim to reduce preventable infections, improve health outcomes, and support healthy aging in a population facing significant health-care challenges.

The recommendations highlight the importance of implementing targeted immunization programs for older adults, addressing critical barriers such as healthcare system fragmentation, limited access in rural areas, and financial constraints. These evidence-based statements, developed through expert consensus, provide a framework for improving vaccination coverage and reducing the burden of respiratory diseases in LAC. Achieving these goals requires coordinated action and collaboration among policymakers, health-care providers, and communities to ensure equitable and effective implementation of vaccination strategies tailored to this vulnerable population.

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CONFLICT OF INTEREST

JFP, and FMRC, have served as consultants for ALMA and Pfizer, and DUP has served as a consultant for ALMA. However, the sponsor did not participate in the research process and guaranteed the independence of the investigators. The researchers claim no conflicts of interest. Otherwise, no potential conflict of interest relevant to this article was reported.

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AUTHOR CONTRIBUTIONS

Conceptualization, JFP, FMRC, CCG, JLDM, PBGT, PFVB, JAFC, DUP, LMGR; Data curation, JFP, FMRC, DUP; Investigation & Methodology, JFP, FMRC, CCG, JLDM, PBGT, PFVB,

JAFC, DUP, LMGR; Formal analysis, JFP, FMRC, DUP; Writing-original draft, JFP, FMRC, CCG, JLDM, PBGT, PFVB, JAFC, DUP, LMGR; Writing-review & editing, JFP, FMRC, CCG, JLDM, PBGT, PFVB, JAFC, DUP, LMGR.

SUPPLEMENTARY MATERIALS

Supplementary materials can be found via <https://doi.org/10.4235/agmr.25.0087>.

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