Introduction

1. Immunization is a global health and development success story, saving millions of lives every year. We now have vaccines to prevent more than 20 life-threatening diseases, helping people of all ages live longer, healthier lives. Eradication and elimination of selected diseases have been made possible by immunization. Immunization is the foundation of the primary health care system and an indisputable human right. It is also one of the best health investments money can buy.

2. However, the very success of past immunization programs creates a risk that complacency will undermine further progress. Moreover, access to vaccines remains inequitable, and in many countries progress in expanding immunization activities has stalled or even reversed. In the last decade, national immunization programs have suffered setbacks in several areas, including a) a decrease in vaccine coverage, b) weakening of epidemiological surveillance, c) inadequate long-term sustainable financing for immunization, and d) increasing vaccine hesitancy linked in part to “fake news.” These setbacks have contributed to emerging outbreaks of vaccine-preventable diseases in the Region of the Americas.

3. This policy considers the mandate and existing plans and strategies of the Pan American Health Organization (PAHO) (1-4). It provides an assessment of the current situation of immunization programs in the Region, pointing out critical areas and challenges, and proposes priority lines of action grounded in a revitalized vision of immunization as a public good for universal health. To this end, the policy provides strategic guidance on how countries can reinvigorate their immunization programs by implementing innovative strategies that incorporate proven best practices along with emerging technological, communication, behavioral, and data analysis tools.
Background

4. Immunization programs in the Region of the Americas have contributed significantly to the improvement of population well-being over the past five decades (5). Since its establishment in 1977, the Expanded Program on Immunization in the Americas (EPI) has worked in coordination with Member States to achieve the elimination of poliomyelitis, measles, rubella, congenital rubella syndrome, and neonatal tetanus, as well as the epidemiological control of other vaccine-preventable diseases (VPDs). Countries have strengthened their immunization programs and surveillance systems and expanded vaccine coverage with support from the Revolving Fund for Access to Vaccines (Revolving Fund) (6, 7). They have renewed commitments to the achievement of disease control and elimination (8), including for many VPDs (9, 10), and embraced the introduction of new vaccines (11). Countries have also reaffirmed the need for collective action to fulfill targets under Sustainable Development Goals (SDGs) 3, 4, 5, 10, and 17 (12).

5. The achievement of these goals and targets and the positive impacts of immunization on population health and national economies have been made possible by the commitment of Member States, with technical support from the Pan American Sanitary Bureau (PASB) and the Revolving Fund. Most notable is the intensive and continuous support for the EPI from ministries of health and heads of state over several decades.

6. A robust body of evidence indicates that immunization is among the most cost-effective health strategies available (13, 14). In addition to health benefits, immunization results in increased life expectancy and provides a high rate of return on the funds invested (15). This suggests that the Expanded Program on Immunization makes a real contribution to economic development and educational attainment (16, 17).

7. Nonetheless, over the past decade coverage of many vaccines has decreased. For example, the Region of the Americas has presented the largest drop in coverage for the third dose of diphtheria-tetanus-pertussis vaccine (DTP3) of any world region (94.4% in 2010 versus 84% in 2019). These decreases have occurred in most countries of the Region, leading to a larger population of individuals susceptible to VPDs. The timeliness and quality of epidemiological and VPD laboratory surveillance has also been affected. This has contributed to outbreaks, in various countries in the Region, of measles, rubella, pertussis, diphtheria, yellow fever, and other vaccine-preventable diseases that had previously been eliminated or controlled.

8. There are several reasons that immunization may no longer be considered a primary health care priority in many countries of the Region. One is the very success of the immunization program. Another is the recent and recurrent emergence of other health priorities and emergencies such as Zika and, most notably, COVID-19. In 2020, the COVID-19 pandemic led to an important disruption of immunization services in various countries, accelerating the decline of VPD coverage. The number of children receiving vaccinations decreased by 33% for DPT3 and by 24% for Measles, Mumps, and Rubella vaccine (MMR) when the January-to-June periods in 2019 and 2020 are compared (18). Important activities such as measles campaigns also were postponed.
9. If strategic action is not taken to strengthen and reinvigorate immunization programs and maintain past gains, significant preventable morbidity and mortality from vaccine-preventable diseases will continue to increase.

Situation Analysis

10. Immunization programs at national level are facing various political, structural, and operational challenges. The lack of a strategic approach to the reform and decentralization of health systems is one of the main concerns. Another is the difficulty in reaching inhabitants of marginal peri-urban and urban areas as well as remote border, mountain, and jungle areas, where socioeconomically marginalized populations face access barriers to immunization and other health services. Mobilization and migration of diverse populations across the Region further accentuates these barriers. Meanwhile, the increased generation and sharing of disinformation and fake news related to vaccines and immunization has fueled growing vaccine hesitancy in some population groups.

11. The COVID-19 pandemic, which has deepened existing and emerging inequities within and between countries, has also widened gaps in immunization programs. The Region of the Americas is particularly vulnerable to COVID-19-induced disruptions because of its high levels of labor informality, urbanization, poverty, and inequality, with large population groups living in vulnerable conditions, and because of weak health and social protection systems in many countries.

12. In addition to economic costs, vaccine preventable diseases impose intangible social costs on individuals, families, and communities. As a result, the burden of these diseases prevents the full achievement of health and development. This underscores the need to confront the current challenges facing immunization programs in the Region. In terms of economic benefits, the high return on investment from immunization has been repeatedly demonstrated in the past decade (13, 14). Indirect benefits of childhood vaccination in other age groups, such as the effects of pneumococcal vaccination in children observed in adults and elderly, are also important. In addition to health-related benefits, broader economic benefits around childhood development, household behavior, and macro-economic indicators have been shown to be significant.

13. As a result of the pandemic, the Economic Commission for Latin America and the Caribbean (ECLAC) projects a 9.1% decline in the Region’s gross domestic product for 2020. Unemployment in Latin America is projected to rise significantly as well (19). In order to control the pandemic and reopen their economies, countries must demonstrate effective and dynamic leadership and stewardship through national plans that incorporate health, economic, and social policies. Central to that effort is a timely, efficient, and equitable rollout of the COVID-19 vaccination program. Reaching a high vaccine coverage rate will reduce mortality and morbidity from the disease and allow for the opening up of economies and societies.
14. Beyond the rollout of the COVID-19 vaccination effort, the overall strengthening and reinvigoration of immunization programs for VPDs should be a cornerstone of the post-pandemic recovery process. Realization of the full benefits of immunization, however, will depend on sustained investment in and commitment to a broad range of immunization programs.

**Proposal**

15. This policy document provides a strategic framework with prioritized lines of action to guide countries of the Region in strengthening their national immunization programs and revitalizing immunization as a public good for universal health. The vision is one of reduced morbidity and mortality, increased health, and economic benefits in the countries of the Americas, driving toward the achievement of goals and targets of the SDGs (12), the Sustainable Health Agenda for the Americas 2018-2030 (1), the Strategic Plan of the Pan American Health Organization 2020-2025 (2), and the Immunization Agenda 2030 of the World Health Organization (3).

16. In line with other public health programs, this policy will benefit populations living in situations of vulnerability, including socioeconomically marginalized groups, who experience access barriers to immunization and health services. These include women and girls, indigenous people, Afro-descendants and members of other minority ethnic groups, people living in rural areas, LGBTQ people, migrants, prisoners and other people deprived of liberty, and other marginalized groups.

17. Building on existing structures and strategies and incorporating innovative tools, technologies, and interventions, this policy will promote synergies, networking, and integration of the various stakeholders within the health system and in sectors beyond health. It seeks to also incorporate digital intelligence into various aspects of the immunization program; use innovative communication approaches to build social awareness and trust in vaccines and increase access to services; enhance surveillance capacity and incorporate geo-referencing and big data into routine data analysis; build the capacity of human resources; enhance and apply health research to guide program implementation; and strengthen governance, stewardship, and financing of immunization programs. Innovation and use of digital technology will be crucial in pursuing additional and unconventional approaches that can help bridge existing gaps.

18. Taking into account the cross-cutting themes, and in line with the principle of leaving no one behind, six strategic lines of action are proposed to strengthen and modernize immunization programs and promote the incorporation and use of innovative technology and tools.
Strategic Line of Action 1: Strengthen governance, leadership, and financing of immunization programs

19. Governance, leadership, and financing are crucial at all levels of health care management, including management of immunization programs. Strong leadership, underpinned by political commitment, is required to ensure that strategic policy frameworks exist and are applied in combination with effective oversight, accountability, coalition building, regulation, and attention to system design (20). Sustainable finance is particularly essential to the strengthening of immunization programs.

20. While governments are the primary drivers of this effort, other actors, including health care practitioners, civil society, and partners, are also critical in making sure that health systems and immunization programs achieve their goals. These stakeholders should be actively engaged to enhance program governance, a core component of resilient health systems and programs.

21. Proven approaches include deploying immunization “ambassadors” who can engage with leaders and decision makers to push forward immunization efforts, and appointing champions from different groups of stakeholders in all walks of life to promote immunization and become role models for their peers. These approaches have been successful in many settings and with many different target groups.

22. Important aspects to be considered include evidence-based policymaking, efficient and effective service provision arrangements, regulatory frameworks and management systems, responsiveness to public health needs, transparency in policymaking, resource allocation, responsible leadership to address public health priorities, clear and enforceable accountability, and the cross-cutting themes of equity, gender, ethnicity, and human rights (20). The implementation of standardized health system governance and leadership indicators will allow for continuous monitoring, assessment, and tracking of trends over time.

23. A strategic operational coordination of immunization activities is even more important in the context of decentralized health care systems (21). Even though program administration is decentralized, a harmonized and engaged network of program managers at the local, intermediate, and national levels is crucial for better governance and improved leadership at all levels.

24. Finally, a strong legislative framework is increasingly important to sustain the national immunization programs and facilitate high vaccination coverage. This framework must be strengthened in all Member States, with attention to immunization financing, incorporation of new vaccines, updating of vaccination schedules, and vaccination liability, among other issues.
**Strategic Line of Action 2: Enhance monitoring of vaccine coverage and surveillance, incorporating digital intelligence strategies into routine analysis**

25. Monitoring of immunization programs, including vaccine coverage and vaccine safety, and surveillance of vaccine-preventable diseases enable the identification of programmatic areas that are performing well and areas that require further support. Digital technologies and their applications in public health are evolving and expanding quickly. The adoption of innovative technologies, including digital intelligence, geo-referenced information, and others, will strengthen monitoring and surveillance and improve the use of data for decision making about solutions to strengthen health systems (22).

26. Developing and implementing individual electronic immunization information systems, with reminder functions and awareness campaigns, can play a major role in efforts to reinvigorate immunization programs and increase and sustain vaccine uptake. These systems can take advantage of the use of prescriptive, predictive, and descriptive analytics in real-time services to gain insights from health care data. Geo-reference systems could also contribute to the analysis of vaccine coverage, vaccine safety, and epidemiological surveillance at district level and lower geographic levels. Data capture from online global platforms, including social media, news sites, forums, and blogs, would improve the system’s capacity to identify clusters of unvaccinated individuals or groups of individuals hesitant toward vaccination, and to monitor disease trends.

**Strategic Line of Action 3: Strengthen the integration of immunization programs into the primary health care system toward universal health**

27. Formerly a vertical and centralized program, the immunization program is facing challenges linked to political, structural, and operational changes. A key problem is the lack of a strategic and coordinated approach to strengthen immunization and other priority health programs, following the health system reforms and decentralization processes that took place in most countries of the Region in the 1990s.

28. Strengthening primary health care policies and leadership in health systems is key to achieving the goals of universal health coverage and health for all. This includes financial risk protection, access to quality essential health care services, and access to safe and effective vaccines for all. Integration of immunization programs into primary health care will improve access and address inequities in access to reach universal health.

29. Ensuring that immunization, maternal care, and other essential health services are fully functional and integrated into primary health care will also be important for responding to emerging threats, epidemics, pandemics, and disasters.

**Strategic Line of Action 4: Develop innovative and strategic communication approaches to build social awareness and trust in vaccines and increase access to services**

30. Building and maintaining confidence in immunization programs is a continuous, never-ending task. Lack of accurate information is mirrored by the wide circulation of misinformation. The impact of information on immunization behavior is mediated by
sociocultural and political influences in specific settings, which calls for locally appropriate communication responses. It is imperative to be proactive when working with social media and to use digital platforms for monitoring and responding to information and rumors.

31. In a world where communication and information-sharing platforms are evolving rapidly and incorporating new technologies and modes of utilization by the population, efforts to strengthen immunization programs should utilize a wide array of social mobilization and information systems, including big data and social media monitoring, among others. Promoting immunization through media, including radio, television, and social media platforms; engaging with community networks; and engaging in interpersonal communication with influential local leaders (religious, medical, and political) all have been demonstrated to build trust and increase awareness and acceptance of vaccines (23).

32. Priority needs to be given to improving access to accurate information from trusted sources about the benefits of vaccines, vaccine safety, and the availability of convenient, appealing vaccination services. Specific attention should be paid to population subgroups that are underserved or difficult to reach or have special needs. Messages should be culturally appropriate and delivered in the preferred language of the recipients, by trusted spokespeople, on channels and platforms that are used by the target populations.

33. Different communication messages should be designed to target a variety of audiences and stakeholders, including parents, adolescents, children, health workers, and community leaders, among others. Specific messaging should be developed for health workers, as they are the most trusted source of information on vaccination for communities and are critical in building and maintaining the population’s trust in the immunization program. Such a human-centered approach will help ensure a positive vaccination experience for users and promote immunization as a social movement in which every single person plays a role.

34. Strategic communication, social mobilization, and advocacy activities will help governments address these challenges, working in a strong alliance with stakeholders. Government authorities should also ensure that, in addition to budgeting for risk communication and demand generation activities, they have crisis communications plans in place to respond to any potential shocks to the immunization program that could shake the population’s confidence in it.

**Strategic Line of Action 5: Strengthen human resource capacities for immunization programs**

35. Human resources are the backbone of health care systems and programs, including immunization. Capacity building, consistent with national plans, is an essential component of efforts to strengthen country ownership and sustainability of immunization programs (24). Innovative, sustainable, evidence-driven approaches to human resources capacity building are required to strengthen the abilities of individuals, organizations, and systems to perform core functions sustainably, improving and developing them over time.
36. Stronger leadership in managing immunization programs, epidemiologic surveillance, and laboratory networks at all levels will reinforce and enhance the performance of decentralized programs. Health care workers involved in the various functions of immunization programs, including managerial, technical, and operational teams at all levels, should be trained on a regular and ongoing basis. In addition, local health providers need to be trained and adequately supervised to ensure that they provide relevant and comprehensible information in a respectful and culturally sensitive manner.

37. These processes should be guided by a strong set of country-centered principles and should be tailored to each country’s needs. Strengthened mechanisms are also needed to support the application of learned skills, as well as to monitor the incorporation of these skills into health care systems and use of these skills by health providers. Capacity-building activities should integrate existing training programs and the network of teaching facilities at both country and regional levels. This framework should broaden the use of virtual e-learning training platforms, in combination with traditional face-to-face training modalities, for increased reach and efficiency. Additional modalities may include twinning and mentoring, online webinars, blog posts, discussion forums, and newsletters to provide timely and updated content to health care professionals engaged in immunization activities.

38. Network peer learning, using social media platforms for the purposes of experience sharing, skills building, and relationship strengthening among peers, in line with current digital and social media advances, will help country teams address critical tasks related to immunization.

**Strategic Line of Action 6: Use scientific evidence to guide decision making and program implementation**

39. Evidence-based decision making is a process for making the best decisions possible using the best evidence available. During the COVID-19 pandemic, decision makers face heightened uncertainties and societal pressure in a climate of widespread fear and misinformation. In this context, the use of sound, peer-reviewed health research and literature to support policy and decision making on health—and on immunization in particular—becomes even more important (25). The use of scientific evidence to guide program implementation will enable immunization programs to improve their performance, particularly in the context of the COVID-19 pandemic and post-pandemic period.

40. Toward this end, actions are needed to strengthen the demand, generation, and application of high-quality evidence, as well as the abilities of health care managers to use such evidence to support decision making and program development and implementation. Capacity-building activities and information sharing with the public should seek to boost trust in science and in evidence-based approaches. This will enable people to critically assess the information (and misinformation) about immunization that they receive through mainstream and social media.
41. Support and use of evidence generated by operational research should be strengthened. This can be achieved by articulating with existing institutions and research groups in a collaborative and integrated process whereby policymakers indicate operational research needs and use the evidence generated to support the decision-making process.

**Monitoring and Evaluation**

42. The proposed time frame for this policy is nine years. Actions will be integrated in the biennial Program Budgets, and therefore the monitoring and reporting to Member States will be synchronized with the corresponding reports (Strategic Plans and Program Budgets). A midterm review will be conducted at the end of year five, and a final report will be issued the year after completion of the policy.

**Action by the Directing Council**

43. The Directing Council is invited to review the information presented in this document, provide any comments it deems pertinent, and consider approving the proposed resolution presented in Annex A.

**Annexes**

**References**


PROPOSED RESOLUTION

REINVIGORATING IMMUNIZATION AS A PUBLIC GOOD FOR UNIVERSAL HEALTH

THE 59th DIRECTING COUNCIL,

(PP1) Having reviewed the policy document *Reinvigorating Immunization as a Public Good for Universal Health* (Document CD59/10), which sets out the approach of the Pan American Health Organization and a strategic framework for revitalizing immunization programs in the Region of the Americas;

(PP2) Considering that, despite the tremendous achievements of immunization programs in past decades, progress has stalled or even reversed in many countries in the Region, putting past achievements at risk;

(PP3) Acknowledging that immunization is among the most cost-effective public health strategies available, and that in addition to its health benefits, immunization provides a high rate of return on investment, resulting in contributions to socioeconomic development and educational attainment;

(PP4) Cognizant that this policy reflects and supports the commitment made by Member States to advance toward meeting the Sustainable Development Goals by 2030, the goals of the Sustainable Health Agenda for the Americas 2018-2030, and the goals of the Immunization Agenda 2030 of the World Health Organization,

RESOLVES:

(OP)1. To approve the policy *Reinvigorating Immunization as a Public Good for Universal Health* (Document CD59/10).
(OP)2. To urge Member States, according to their national context and priorities, to:

a) adopt and implement the strategic lines of action of this policy to reinvigorate immunization programs through the implementation of innovative approaches and best practices, incorporating technological, communication, behavioral, and data analysis tools;

b) declare vaccination as a public good and raise awareness among health care workers to advise individuals regarding vaccination, among parents and guardians to have their children immunized, and among individuals to be vaccinated, considering officially recommended immunization schedules;

c) strengthen governance and leadership of immunization programs, combined with effective oversight, accountability, coalition building, regulation, and attention to system design, to ensure adequate and efficient implementation of this policy and progress toward universal health;

d) ensure and protect immunization-specific budgets, including but not limited to the costs of vaccines and supplies, human resources, and immunization operations.

(OP)3. To request the Director to:

a) provide technical cooperation and promote collaboration within and across all levels of the Organization and Member States in support of revitalized immunization efforts;

b) promote and enhance constructive collaboration with other stakeholders relevant to the implementation of this policy—including but not limited to other international organizations, existing networks, programs, and collaborating centers—to pursue synergies and to increase efficiencies;

c) enhance coordination at regional and country levels to improve access to vaccines, diagnostic tests for laboratory networks supporting surveillance, and other key supplies relevant to primary health care, through the Revolving Fund for Access to Vaccines and the Regional Revolving Fund for Strategic Public Health Supplies;

d) report to the Governing Bodies on the progress made and challenges faced in implementation of this policy in 2027 and 2031.
Annex B

Report on the Financial and Administrative Implications of the Proposed Resolution for PASB

1. **Agenda item:** 4.7 Reinvigorating Immunization as a Public Good for Universal Health

2. **Linkage to Program Budget of the Pan American Health Organization 2020-2021:**
   - *Outcome 4:* Response capacity for communicable diseases
   - *Outcome 17:* Elimination of communicable diseases
   - *Outcome 24:* Epidemic and pandemic prevention and control

3. **Financial implications:**
   a) Total estimated cost for implementation over the lifecycle of the resolution (including staff and activities): |

<table>
<thead>
<tr>
<th>Area</th>
<th>Estimated cost (in US$)</th>
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</thead>
<tbody>
<tr>
<td>Human resources</td>
<td>52,200,000</td>
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<tr>
<td>Training</td>
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</tr>
<tr>
<td>Consultants/service contracts</td>
<td>7,200,000</td>
</tr>
<tr>
<td>Travel and meetings</td>
<td>12,600,000</td>
</tr>
<tr>
<td>Publications</td>
<td>2,700,000</td>
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<tr>
<td>Supplies and other expenses</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>90,000,000</strong></td>
</tr>
</tbody>
</table>

   b) Estimated cost for the 2022-2023 biennium (including staff and activities):
   - $20,000,000 for the biennium.

   c) Of the estimated cost noted in b), what can be subsumed under existing programmed activities?
   - All of the costs noted in b) can be subsumed under existing programmed activities.

4. **Administrative implications:**
   a) Indicate the levels of the Organization at which the work will be undertaken:
   - Regional, country, and local levels.

   b) Additional staffing requirements (indicate additional required staff full-time equivalents, noting necessary skills profile):
   - There is no need for additional staffing.

   c) Time frames (indicate broad time frames for the implementation and evaluation):
   - Time frame is nine years (2022-2030).
Analytical Form to Link Agenda Item with Organizational Mandates

1. **Agenda item:** 4.7 Reinvigorating Immunization as a Public Good for Universal Health

2. **Responsible unit:** Family, Health Promotion and Life Course (FPL)

3. **Preparing officer:** Dr. Luis Andres de Francisco, Dr. Cuauhtémoc Ruiz Matus, and Dr. Martha Velandia

4. **Link between Agenda item and the Sustainable Health Agenda for the Americas 2018-2030:**
   - **Goal 5:** Ensure access to essential medicines and vaccines, and to other priority health technologies, according to available scientific evidence and the national context
   - **Goal 10:** Reduce the burden of communicable diseases and eliminate neglected diseases

5. **Link between Agenda item and the Strategic Plan of the Pan American Health Organization 2020-2025:**
   - **Impact Indicator 15:** Incidence rate of measles
   - **Outcome 4:** Increased response capacity of integrated health services networks (IHSNs) for prevention, surveillance, early detection and treatment, and care of communicable diseases, including vaccine-preventable diseases
   - **Outcome 17:** Health systems strengthened to achieve or maintain the elimination of transmission of targeted diseases
   - **Outcome 24:** Countries’ capacities strengthened to prevent and control epidemics and pandemics caused by high-impact and/or high-consequence pathogens

6. **List of collaborating centers and national institutions linked to this Agenda item:** N/A

7. **Best practices in this area and examples from countries within the Region of the Americas:**
   - The Expanded Program on Immunization in the Americas, established 44 years ago, has worked in coordination with Member States to achieve the eradication of poliomyelitis and the elimination of measles, rubella, congenital rubella syndrome, and neonatal tetanus, as well as the epidemiological control of other vaccine-preventable diseases.
   - The Region of the Americas has extensive experience with the introduction of new vaccines and with interagency and community participation activities such as Vaccination Week in the Americas.
   - All Member States have national immunization programs, and in most of the Member States immunization is considered a public good.
   - Over the years, the Pan American Sanitary Bureau has provided important technical support for the consolidation and operation of national immunization programs and has operated the Revolving Fund for Access to Vaccines, through which access to quality vaccines at affordable prices is guaranteed for Member States.