

TOWARDS SUSTAINABLE IMMUNIZATION FINANCING: A GLOBAL CALL TO ACTION

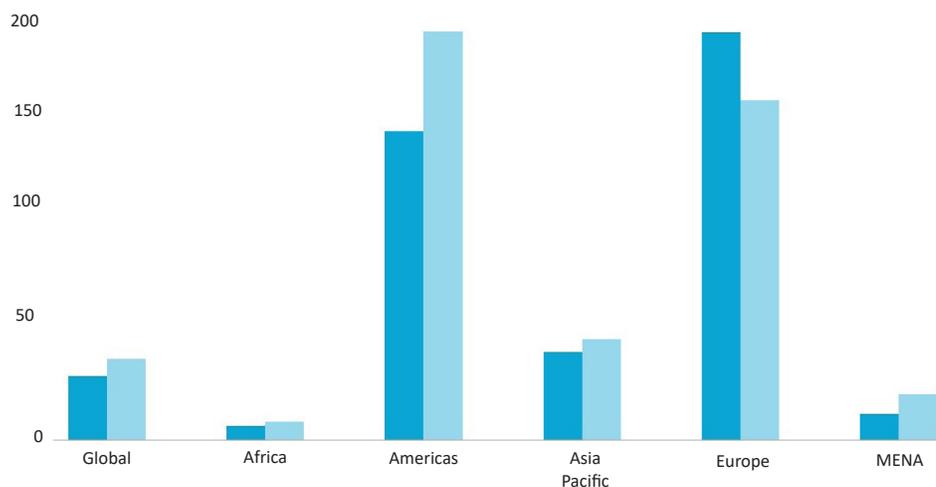
Without global attention and action on addressing challenges to sustainable immunization financing, the impressive gains made by immunization programs around the globe are at risk of sliding back. In the last decade, countries have made significant gains in improving access to and coverage of new and under-utilized vaccines around the world, achieving several key targets set in the Global Vaccine Action Plan (GVAP).¹ Despite these gains, there remains more to be done to reach the overall GVAP targets and further improve immunization programs, especially across the life-course. In addition to demonstrating the value of vaccination when making the case for additional investment in current programs, it is now necessary to focus on improving country governments' ability to pay for all aspects of their current and future immunization programs.

Countries are facing challenges in mobilizing resources to sustainably invest in both expansion of existing schedules as well as in needed program improvements. Only 53% of Gavi-supported countries are on track to successfully transition to fully self-financed immunization programs, and a 2016 study estimated that government health expenditures need to increase by 2.3% in low- and middle-income countries to make up for current and anticipated immunization funding shortages.^{2,3} Similarly, only 46% of middle-income countries (MICs), classified as having a GNI per capita between \$996 and \$12,055,⁴ increased their domestic immunization expenditures between 2013 and 2017.⁵ As seen below, the global increase in average government expenditure on routine immunization masks the regional and country-level differences.

Changing demographics and the rise of non-communicable diseases are placing new and growing demands on healthcare budgets, putting further pressures on investment in immunization programs. In 2017, 8.7% of the global population was at least 65 years old, representing a rise of nearly 2% since 2000.⁶ This aging of the global population is expected to continue and requires additional focus and investment from country governments in vaccines across the life-course.

FIGURE 1

Average government expenditure on routine immunization per live birth, by region (US\$)



Source: WHO Joint Reporting Forum

Yet healthcare budgets worldwide are also facing new and growing demands, from the rise of non-communicable diseases to the emergence of new health technologies, including new and under-utilized vaccines. Policymakers are required to make difficult decisions in how limited resources are allocated, potentially limiting further investment in immunization programs.

Focus on improving sustainable immunization programs needs to address government ability to pay based on regional and country contexts. Demographic changes, higher burdens of non-communicable diseases, health system reforms and changing financing architectures are creating challenges and opportunities for country governments to meet growing health needs with limited resources. It is no longer enough to focus solely on the value and cost-effectiveness of immunization programs when making the case for additional investment. It is also necessary to focus on improving country governments' ability to pay for current and future immunization programs. To do so, we must understand factors and trends influencing financing at country and regional level and draw from global learnings on ways to improve ability to pay for all aspects of strong and growing immunization programs.

TRENDS AFFECTING SUSTAINABLE IMMUNIZATION FINANCING

Although sustainable immunization financing is a global issue, regions and countries reflect these challenges in different ways. While limited fiscal space and budget headroom for immunization programs is often viewed as a challenge for lower-income countries, these issues also affect countries across different income levels and wider geographies. These challenges manifest differently depending on the country's health systems as well as evolution and maturity of different financing architectures, making it critical to analyze across country income-levels as well as across regions.

Budget Headroom and Resource Mobilization

Lower-middle income countries are facing increased pressure to mobilize domestic resources as they transition off donor support.^b Both low-income and lower-middle income countries (LMICs) are largely reliant on donor support for their immunization programs – whether through Gavi or other funders.⁷ However, LMICs transitioning within the next few years are struggling to ensure the financial sustainability of their immunization programs before they fully transition.⁸ These financing challenges faced by LMICs to secure the domestic resources needed are for both procurement and program delivery.⁹ A recent study found that 67% of Gavi-transitioning countries report immunization financing shortfalls, and the same amount of countries lack strategies for resource mobilization and overall immunization financing. 73% of transitioning countries also have weak procurement processes.¹⁰ These issues indicate a need for increased immunization program investment in LMICs, potentially through innovative mechanisms.

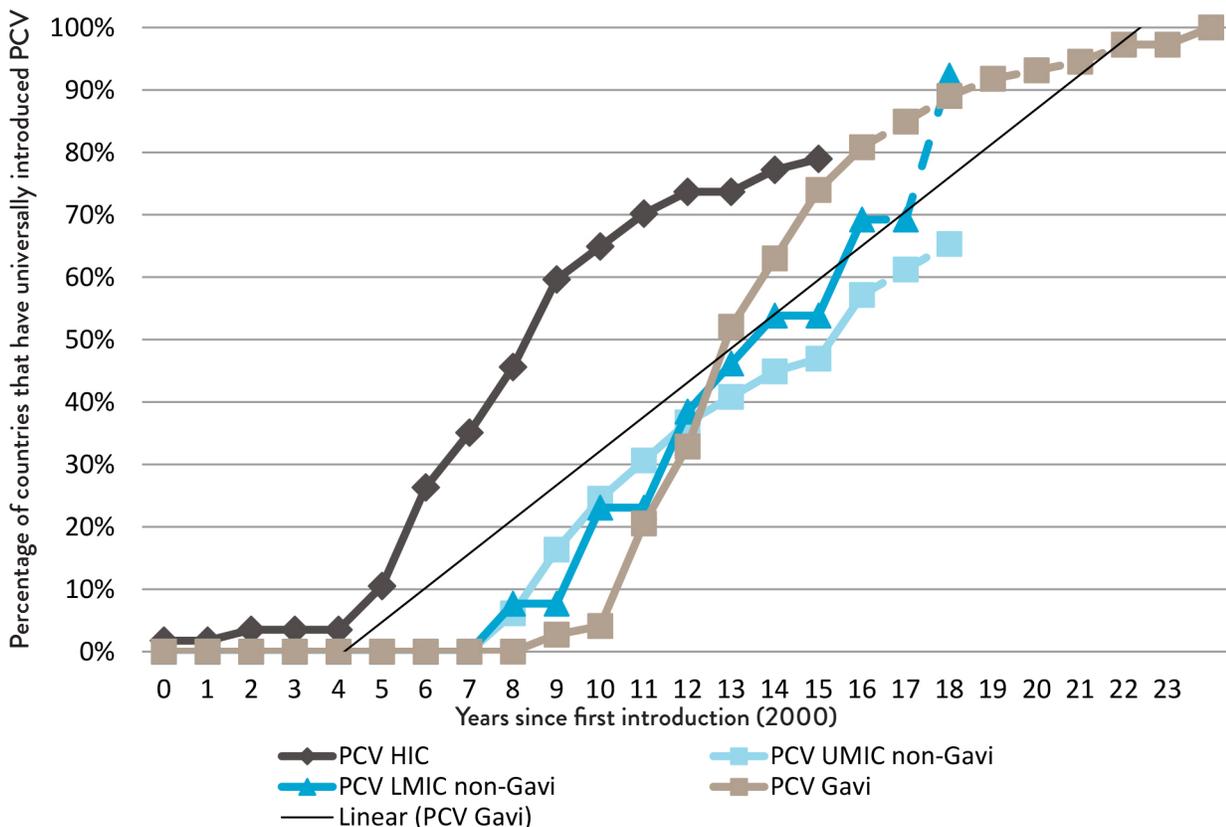
Middle-income countries face a unique set of obstacles to immunization budgeting that impacts their ability to strengthen or expand immunization programs. More than half of the world's MICs^c have never been Gavi-supported (63 out of 105 MICs as of 2017).¹¹ These non-Gavi countries pay considerably higher prices for many vaccines compared to Gavi countries and receive very limited or no technical assistance for strengthening immunization programs. Due to the lack of donor funding, they must work within the confines of domestically resourced budgets and tend to face budget limitations as competing health and other national priorities create inflexibility in budget allocations. Limited budget headroom restricts the government's ability to accommodate evolving immunization program needs and costs.¹² While 80% of MICs had a budget line for vaccines as of 2017, only 46% increased their domestic immunization expenditures between 2013 and 2017.¹³ This affects not only the ability of MICs to add new vaccine technologies, but also limits investment needed to ensure high coverage of their existing vaccine schedules. Due in part to their limited immunization budgets, non-Gavi MICs tend to lag behind both Gavi-supported and higher-income countries in the introduction and uptake of new vaccines, are more likely to experience procurement delays, and several MICs have experienced coverage declines or outbreaks of vaccine-preventable diseases.¹⁴

^bNote: Income groupings based on World Bank income group classifications. Low-income countries have GNI per capita less than \$995, Lower-middle income \$996-\$3,895, Upper-middle income \$3,896-\$12,055, High-income \$12,056 or higher GNI per capita.

^cReferences to middle-income countries include both upper-middle and lower-middle income countries.

High-income countries (HICs) generally have larger health budgets, but continued and increased investment is needed to ensure broad population coverage for life course vaccines. Epidemiological and demographic shifts in HICs require increased investment in life-course vaccinations to ensure immunization program alignment with population needs. Despite their high-income classification, these countries face financing challenges in achieving this alignment. One study found that 16% of high-income countries have not introduced pneumococcal conjugate vaccine, suggesting that these countries are not immune from budget constraints.¹⁵ For the HICs that have introduced new life-course vaccines, these introductions do not necessarily result in broad coverage, with many countries introducing only in limited population cohorts.¹⁶ Other HICs lack dedicated public funding to support life course vaccines, which can increase out-of-pocket costs and ultimately present a barrier to patient access. As of 2015, 58% of European countries did not use public funding to cover the influenza vaccine, and experienced lower coverage rates than those countries using public funding.¹⁷ This evidence indicates the need for continued investment and need for increased resourcing of immunization programs even in countries with larger overall health budgets.

FIGURE 2
Historical PCV Introduction by Income Group



Source: International Vaccine Access Center (IVAC), Johns Hopkins Bloomberg School of Public Health. VIEW-hub Global Vaccine Introduction and Implementation Report, June 2017.

Strategic Purchasing and Performance Improvement

The degree to which public immunization programs are integrated in public insurance schemes depends on the maturity of the scheme in the overall health system. Public insurance schemes can and do play a role in immunization programs around the globe, from procuring vaccines to supporting program delivery. This is largely determined by the evolution and maturity of the public insurance schemes as seen across different regions. Regardless of the maturity levels of a country's public insurance scheme, there are lessons that can be applied across and within all regions to support countries looking to leverage these important actors in their public immunization programs.

Many public insurance schemes in Europe finance different aspects of the immunization program, creating opportunities for program efficiencies and resource generation for governments. Of 39 countries in Europe with public insurance schemes in place, 30 countries use these schemes to finance some aspect of the public immunization program. This financing takes multiple forms, with some insurance schemes, such as in France paying for vaccine procurement and reimbursing providers for program delivery. This reimbursement includes a pay-for-performance component, in which the social health insurance scheme pays a small bonus to providers who reach their immunization targets. Other countries such as the Czech Republic, England, Latvia, Portugal and Poland, also procure and distribute vaccines, reimburse providers, and some also monitor and report on program outputs. Such integration of immunization programs can lead to program efficiencies, with countries such as the Czech Republic reporting DPT3 immunization coverage rates of 96% in 2017.¹⁸ By shifting responsibility for 90% of immunization program financing to public insurance schemes, the Czech Ministry of Health has saved \$38 million annually.¹⁹

In Latin America, many public insurance schemes strategically purchase immunization program delivery, allowing for financing to positively influence program outcomes. 21 of the 33 Latin American countries with public insurance purchasers finance immunization at least in part through public insurance schemes, most often covering immunization program delivery. Vaccine procurement is typically centralized, largely funded by Ministries of Health owing to widespread usage of the PAHO Revolving Fund by country governments. Yet immunization program delivery is often done by public schemes, who can leverage financing to influence program outcomes. Argentina has implemented a pay-for-performance system, under which bonus payments are made to health facilities who meet targets on indicators included "Effectiveness of Prenatal Care", which included the delivery of the tetanus vaccine for pregnant women, and "Immunization Coverage" for infants. Beneficiaries in large hospitals saw a 74% drop in neonatal mortality, with the World Bank attributing these outcomes, in part, to improved vaccination for mother and child.²⁰ While procurement of public immunization schedule vaccines is handled by Ministries of Health, some insurers in the region introduce additional vaccines to their benefits packages, beyond the public schedule. In Mexico, several employment-based social insurance schemes procure hepatitis A and varicella vaccines for at-risk populations, despite these vaccines not being on the national schedule.²¹

In the Asia Pacific region, public insurance schemes are growing in importance in health financing, creating new opportunities for immunization financing. Immunization programs in Asia Pacific remain largely under the purview of Ministries of Health as vertical and siloed programs. Even countries with well-established public insurance schemes have historically kept immunization programs separate. Korea, for example, despite having the large and influential National Health Insurance System, maintains stewardship for its national immunization program under the Ministry of Health and Welfare.²² Taiwan's National Health Insurance offers one of the most comprehensive benefits packages in the region but does not include immunization services for their beneficiaries.²³ However, there is a growing trend of countries in Asia Pacific prioritizing Universal Health Coverage and investment in providing social insurance schemes to their populations. This is seen in the growing trend of social health insurance schemes growing from 7% of current health expenditure in 2005 to 10% in 2015.²⁴ In the past few years, there has been increased political and financial support for social health insurance schemes in Vietnam, Indonesia and Philippines in the region. For instances, Indonesia's Jaminan Kesehatan Nasional (JKN) insurance scheme has gone from 86.4 million enrollees in 2014 to nearly 186 million in 2018.^{25,26} These developments indicate that increasing amounts of health financing, and often decision-making, power being channeled through social insurance purchasers. How these insurance schemes can be leveraged to support immunization program goals varies based on country context, but these schemes can be used to both improve program efficiency and introduce new sources of funding for programs. In the Philippines, national insurance scheme PhilHealth was a key player in increasing access to the pneumococcal vaccine, which was not on the public schedule. PhilHealth worked with a vaccine

manufacturer to procure the vaccine at a discounted rate. These savings were then passed on to a target cohort of PhilHealth beneficiaries.²⁷

WAY FORWARD: LEVERAGING TRENDS TO ADDRESS SUSTAINABLE IMMUNIZATION FINANCING

Global stakeholders can take tangible steps to identify and catalyze solutions to secure financing for sustainable and growing immunization programs. Countries across the globe are finding new ways to both bring in additional funding for immunization as well as designing ways to improve the efficient use of existing resources. The global community can help highlight countries that are successfully overcoming their financing challenges as well as support countries looking to better understand potential solutions.

Novel Funding Mechanisms for Immunization

Many countries are identifying new and innovative ways to mobilize resources for public immunization programs. Countries in all regions are using innovative financing mechanisms, including earmarked taxes, sector-specific funds like insurance contributions and mechanisms like trust funds to increase the available funds for public immunization programs. The Philippines and Taiwan have leveraged tobacco and alcohol tax revenue to procure new vaccines for their public immunization programs. The Philippines dedicated 3% of the revenue raised through taxes on alcohol and tobacco towards its public immunization program in 2016.²⁸ Taiwan has similarly dedicated revenues from taxes on alcohol and tobacco towards its National Vaccine Fund.²⁹ Bhutan has established an immunization trust fund to cover its Gavi co-financing responsibilities and has since expanded its application for a wider schedule of the national immunization program. Costa Rica earmarks a portion of its lottery proceeds to its National Immunization Fund, which has been used to support the purchase of the pertussis vaccine.³⁰ Such financing mechanisms can be applied to diverse markets facing resource mobilization challenges for growing national immunization programs. There is immediate need to document and disseminate these examples for other countries to reference.

Using Funding Mechanisms for Performance Improvement

For countries looking to improve public immunization program performance, financing can be leveraged for efficiency gains. Some countries are successfully and strategically finding efficiency gains by engaging public insurance schemes for immunization financing. These purchasers can be leveraged in different ways to improve program performance, such as implementing provider payment mechanisms to incentivize desired outcomes. Such mechanisms include pay-for-performance schemes such as what is seen in Colombia. Colombia transfers a capitation payment to providers to deliver primary care to beneficiaries and also includes an additional fee-for-service payment for every individual vaccinated. This purchasing practice provides an incentive to providers to increase coverage. Other countries, such as Thailand, have had success utilizing evidence for decision-making through health technology assessments as well as through strategic purchasing to increase the efficiency of its immunization program. These demonstrated models, along with a myriad of others, can be learned from and applied to other markets as context allows.

Innovate and Incubate

Many of the opportunities to solve sustainable financing challenges have either not been applied in markets of need or have not been piloted in any way. While interest in innovative financing mechanisms for health is rising, the use of these mechanisms for immunization financing remains nascent.³¹ For example, social impact bonds to scale health interventions have been under consideration in several Latin American countries, including Brazil, Haiti, and Mexico, yet have not been implemented to date.³² Bhutan has established an innovative trust fund, and its success can serve as an example to other nations' contexts. Taiwan's National Vaccine Fund is the national vaccine purchaser, but lacks sustainable financing, and may benefit from adapting Bhutan's model to fit its financing needs. Despite the widespread use of earmarking tax revenue for health, safeguarding this revenue specifically for immunization remains nascent, with exceptions seen in the Philippines, Taiwan and Costa Rica. As countries are increasingly debating new taxes on junk food and sugar-sweetened beverages, public immunization programs should be considered as potential beneficiaries for this tax revenue.^{33,34}

Whether interested in designing an innovative financing mechanism or leveraging expertise for program improvement, governments can explore solutions with additional stakeholders to achieve sustained and growing immunization budgets. In order to capitalize on global trends for the benefit of public immunization programs, governments should explore partnering with other public and private stakeholders. Such partners can help explore and implement innovative financing mechanisms to bring in new funds (additionality) and improve the use of current funds (efficiency) within for the benefit of immunization. To move forward on innovative financing mechanisms that can supplement existing resources, development organizations and private sector partners can provide knowledge and resources traditionally unavailable to governments, and in turn build relationships with governments by serving as a valued and trusted partner. Through exploration of such partnerships, governments can meaningfully work to address affordability challenges and achieve sustained and growing immunization programs.

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