Assessment

Improving Sustainable Immunization Financing in Colombia through Performance-Based Financing

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<tr>
<th><strong>ACRONYMS AND ABBREVIATIONS</strong></th>
<th><strong>UPC</strong></th>
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<tbody>
<tr>
<td><strong>ADRES</strong> Administradora de los Recursos del Sistema General de Seguridad (Administrator of the General Health System’s Resources)</td>
<td><strong>Unidad de pago por capacitación (capitated premium payment for the public system)</strong></td>
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<tr>
<td><strong>DTP</strong> diphtheria tetanus pertussis</td>
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<td><strong>EPS</strong> Entidad Promotora de Salud (Health Promotion Entity)</td>
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<td><strong>HepA</strong> hepatitis A</td>
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<td><strong>HPV</strong> human papilloma virus</td>
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<tr>
<td><strong>IPS</strong> instituciones prestadoras de servicios de salud (health provision institutions)</td>
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<td><strong>IPV</strong> inactivated polio vaccine</td>
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<tr>
<td><strong>MMR</strong> measles mumps rubella vaccine</td>
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<td><strong>MoH</strong> Ministry of Health</td>
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<td><strong>MoH-DPP</strong> Ministry of Health’s Directorate of Promotion and Prevention</td>
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<td><strong>NIP</strong> national immunization program</td>
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<td><strong>PAIWEB</strong> National Immunization Program online register</td>
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<tr>
<td><strong>PBF</strong> performance-based financing</td>
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<td><strong>PBS</strong> health insurance benefits package</td>
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<tr>
<td><strong>SGP</strong> sub-national budget transfer</td>
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<tr>
<td><strong>Td</strong> tetanus diphtheria vaccine</td>
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<tr>
<td><strong>Tdap</strong> tetanus diphtheria pertussis vaccine</td>
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CHALLENGES TO PUBLIC IMMUNIZATION IN COLOMBIA AND POTENTIAL FINANCING SOLUTIONS

Additional and sustained investments are needed for Colombia’s National Immunization Program to expand access in response to a changing disease burden and ongoing demographic transition, and to further improve program performance. With a program schedule that includes 22 vaccines that cover 26 different diseases, Colombia is a regional leader in public immunization programming. However, the Colombian National Immunization Program (NIP) has a pediatric focus with limited life-course vaccines available for adolescents and adults. Despite an increase in the NIP budget at the central level in the recent years, there have been no additional resources allocated for expansion of the current schedule. The last vaccine introductions were an inactivated polio vaccine and a varicella vaccine in 2015. Vaccination coverage rates for the current schedule are improving, though they are generally lower as the target cohort age for a vaccine increases and vary greatly between municipalities and departments, falling as low as 16.7% coverage of DTP3 in Cepita in 2018.¹

In order to expand the public immunization schedule and improve performance of the national immunization program, Colombia needs to find new resources and improve the efficiency in the use of existing resources. As part of the Sustainable Immunization Financing Project, the overarching objective at country level is to increase national budgets, and ensure strong systems to absorb the increased budgets efficiently, for sustained and growing immunization programs.² With this goal in mind, Colombia must find ways to 1) increase their resources for an expanded schedule in line with their disease burden and national priorities, and 2) improve incentive systems using existing resources to maximize program outcomes.

There are a range of financing mechanisms that can support both of Colombia’s objectives. Innovative financing mechanisms can be categorized as (1) novel funding mechanisms that source new program funds, or (2) performance improvement mechanisms that make existing funds go further. Novel funding mechanisms have the potential to bring in more money and combat affordability challenges. These mechanisms are those that tap into or free up new funds outside of existing traditional channels. They may also be successful at making funds more rapidly available. Examples of novel funding mechanisms may include insurance contributions, earmarked taxes, or trust funds.³ Furthermore, performance improvement mechanisms allow better use of existing funds. They can stimulate action to achieve an objective or improve accountability structures by inserting the right incentives into the health system. Performance improvement mechanisms tend to provide output-based financing in contrast to traditional input financing in order to develop the accountability structures needed to improve performance and achieve results. Examples include performance-based or results-based financing mechanisms.

² The Sustainable Immunization Financing project is implemented by ThinkWell and funded by Merck Sharp & Dohme Corp. (MSD), a subsidiary of Merck & Co.
Following a workshop with key national stakeholders in Colombia’s health system, two financing mechanisms were shortlisted as potential solutions to the challenges and opportunities identified for the national immunization program. The workshop, held in Bogotá in June of 2019, resulted in a common understanding of the key NIP challenges and opportunities, as well as a general consensus that innovative financing mechanisms could help to ensure a sustained and growing NIP. Furthermore, group discussions during the workshop identified two innovative financing mechanisms that could potentially be applied to the Colombian context:

1. Performance-based financing mechanism to address the challenges in program performance regarding varied population and vaccination coverage rates
2. Leveraging the public insurance mechanisms for the necessary resources to add new adult and adolescent vaccines, responsive to the changing disease burden and demographic transition.
This report will explore the rationale for leveraging a performance-based financing mechanism to tackle challenges in Colombia’s NIP. It will include a proposed design for the Colombian context as well as actions to undertake in order to drive public implementation of the design.

**PERFORMANCE-BASED FINANCING FOR IMMUNIZATION**

Performance-Based Financing (PBF) is an incentive payment mechanism that, at least partially, funds health providers on the basis of their performance to meet targets or undertake specific actions. PBF is meant to maximize health outcomes while simultaneously increasing provider autonomy in how agreed-upon targets are achieved. Since payments are made to providers only if they meet established targets, there is less emphasis on how those targets are achieved and instead more of a focus on meeting them. This is meant to encourage providers to tailor their approach to best fit the needs of their patients by providing them with the autonomy to pursue those approaches. In systems with poor-performing programs, PBF can incentivize positive behavior change among providers. It can be used to generate demand for underused services, improve care quality, and correct inefficiencies in a delivery system. PBF may also be referred to as “pay-for-performance” (P4P) or “results-based financing” (RBF).

By setting targets related to immunization program performance, PBF can help to address performance challenges identified in the program. Argentina’s Plan Nacer (now known as Plan Sumar) program is designed to improve maternal and child healthcare. Using PBF, the program offers additional monetary incentives to providers that enroll eligible participants and then offer them quality care, measured through a number of set indicators. Indicators for “Effectiveness of Prenatal Care” included the delivery of the tetanus vaccine for pregnant women and “Immunization Coverage” for infants. High levels of enrollment in Plan Nacer increased the number of people accessing the health system. Results from Plan Nacer, an earlier iteration of Plan Sumar, have been positive. An impact evaluation showed improved birth outcomes and decreased neonatal mortality. Plan Nacer beneficiaries in large hospitals saw a 74% drop in neonatal mortality. The World Bank attributes these outcomes, in part, to improved vaccination for mother and child.

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7 Ibid.
Challenges
From diverse coverage rates across geographies and vaccines, to potential underinvestment at the local level, Colombia’s NIP has a number of resourcing and performance challenges that could benefit from a well-designed PBF mechanism. In 2018, 3 departments had less than 80% coverage of the pentavalent vaccine with coverage as low as 69.2% (Figure 3). More recently launched vaccines have similar ranges in coverage. Though varicella vaccination had a 94.8% coverage rate in 2018, coverage levels in one municipality fell as low as 10.0%. Vaccination coverage rates also vary greatly depending on where they fall along the life course. The varicella vaccination coverage rate of 94.8% is for one-year old children. For measles mumps rubella vaccination, which is given at five years old, the national coverage drops to 88.1%. Further along the life-course vaccines, Tdap vaccination coverage for those older than 10 has a 78.9% national coverage rate. Challenges in program outputs may result, in part, from inputs. Though departments and municipalities are responsible for the NIP’s outcomes and finance a number of program activities, including campaigns and vaccine delivery for uninsured individuals, there is no tracking or reporting of budgets for the NIP or expenditures on program activities. These performance issues could potentially be rectified with the right incentives at all levels.

There is further room to improve coordination and alignment across the two major entities in the health system responsible for NIP performance. The Health Promotion Entities (Entidad Promotora de Salud; EPS) are responsible for immunization service delivery as NIP vaccinations are included into the Health Insurance Benefits Package (PBS). EPS purchase services included in the PBS from their contracted providers and use a mix of capitation and output-based mechanisms for their provider payments. As mentioned above, departments and municipalities are also responsible for important program elements involved in the delivery of the NIP. Though EPS finance the delivery of most vaccination services; sub-national governments are responsible for program outcomes. They are responsible for surveillance, they monitor local coverage rates, and run supplementary campaigns as needed.

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9 MoH. Resolution 5857/2018, article 21.
Current PBF Programming in Colombia

Incentives for NIP program performance are currently in place for both sub-national governments and some EPS contracted service providers.

- **EPS Service Providers:** Though the standard payment mechanism for promotion and prevention services is capitation, a few EPS have implemented fee-for-service payments for some NIP vaccinations in addition to the capitation payments. Fee-for-service provider payments act as a performance-based mechanism as it reimburses providers for every vaccination delivery and incentivizes them to push for increased immunization outputs. However, the fee-for-service provider payment mechanism has not been systematically implemented as many EPS consider their promotion and prevention budgets to be too limited. The mechanism was only recently introduced to manage very specific situations, such as the measles outbreak in 2017 and persistently low coverage rates in regions where low population pools result in monopolistic markets with only one public provider available. Some other EPS split the total capitation budget into a fixed amount per registered beneficiary to be paid regardless of service delivery and an additional variable bonus to be paid according to the achievement of coverage targets for certain vaccines. These EPS are incentivizing vaccination outputs, but the bonus to be paid for achieving targets is lower than the payment received in the fee-for-service mechanism.

- **Sub-National Governments:** If coverage rates of fully immunized children in a region reach 95%, sub-national governments (department or municipality) are eligible for a 10% bonus payment in their public health budget transfer (SGP-Public Health) the following year.

**Table 1. Existing PBF Mechanisms for Immunization in the Colombian System**

<table>
<thead>
<tr>
<th>Who Pays</th>
<th>Who Receives Payment</th>
<th>Mechanism</th>
<th>Incentivized Behaviour</th>
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<tbody>
<tr>
<td>EPS</td>
<td>Service Providers (IPS)</td>
<td>Provider payments (Fee-for-service or bonus for reaching targets)</td>
<td>Increased number of vaccinations done</td>
</tr>
<tr>
<td>National Government</td>
<td>Municipalities/Departments</td>
<td>10% bonus on public health sub-national transfer (SGP)</td>
<td>95%+ coverage of DTP, IPV, and MMR</td>
</tr>
</tbody>
</table>

10 Interview with the MOH (Directorate of Promotion and Prevention).
11 Interview with ACEMI
12 Ibid.
13 Note: Mainly pediatric and maternal vaccines in line with regulations about promotion and prevention prioritized interventions. Resolution 3280/2018 regarding the Comprehensive Service Guidelines for the Promotion and Maintenance of Health and for the Maternal-Child Population mentions the NIP, but explicitly prioritizes children and maternal vaccine indicators.
14 Specific criteria used to allocate the SGP-Public Health funding is defined in Law 715/2001.
Certain challenges prevent current performance-based financing mechanisms from having their desired impact in Colombia.

EPS Service Providers: Not all providers are contracted by an EPS that offers fee-for-service or bonus payments for vaccination outputs. This mechanism is thus limited in its application, affecting outcomes across the country.

Sub-National Governments: The 10% bonus payment to sub-national governments is limited in its effect. This bonus is completely focused on pediatric vaccine coverage, though we know that coverage is lower for vaccines further along the life-course. It is also a one-tier incentive where sub-national governments are not necessarily incentivized to improve, but to reach 95% coverage for fully immunized children. This means that even if a department increases their coverage from 70% to 90% for fully immunized children, they are not rewarded. For localities that are well below this rate, it may seem too difficult to reach.

Coordination: These two incentive structures tend to work in parallel with limited coordination between the two actors involved at sub-national level. Though EPS/service providers and departments/municipalities are both responsible for NIP delivery and performance, they have no formal framework within which to work together and the incentives that exist for both groups are not aligned in any way to promote coordination.\footnote{Note: The MoH is currently working on a Resolution to update and make mandatory the NIP Technical and Administrative Handbook (2015) and the NIP Guidelines Document. This Resolution will allow the formal adoption of the NIP responsibilities and a coordination framework across all relevant actors: MoH, departments, municipalities, EPS, and IPS.}
Article 241 of the 2018-2022 NDP presents an opportunity to improve existing incentive structures and further advance national program performance. According to the new National Development Plan (Law 1955/2019), the Ministry of Health (MoH) is in the process of designing a PBF mechanism for health providers. Although the MoH has not yet announced the specific promotion and prevention activities to be considered, or other details related to its implementation, this upcoming PBF mechanism is a clear opportunity to strengthen the immunization program and to better establish and align the incentives framework around immunization.

**Incentivizing provider performance directly has the potential to provide the highest level of impact on immunization coverage rates.** In addition to the NDP’s article 241, the government is also regulating article 235 which will re-tool the criteria taken into account for sub-national budget transfers (SGP-Public Health). This line of financing could also be leveraged for immunization performance if coverage across all NIP schedule is included as part of the new criteria. Though sub-national governments are also heavily involved in program outcomes and delivering immunization services, providers have more direct contact with the individuals that need immunization services. Due to strong coverage of the public insurance system, EPS service providers reach about 95% of the population. In comparison, sub-national governments are responsible for providing services to the remaining 5%. Though these governments also play a huge role in regard to campaigns and are responsible for their population coverage rates, the front-line actors are EPS service providers. With population interaction in mind, engagement on article 241 is more strategic for high impact on immunization program performance.

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Figure 4. Potential Avenues and Agencies for PBF

DESIGNING A PBF MECHANISM IN COLOMBIA TO STRENGTHEN IMMUNIZATION PROGRAM PERFORMANCE

While the broad structure of the mechanism is confirmed within article 241’s language, the indicators for measuring performance are yet to be finalized presenting an opportunity for discussion prior to the article’s regulation. To promote the performance of the NIP, it is critical to 1) ensure inclusion of immunization indicators within the performance incentives and 2) determine which aspects of the program’s delivery should be incentivized for maximum impact on improving performance. Any proposed PBF mechanism for the NIP needs to address current program delivery inefficiencies and challenges that have prevented strong coverage rates for all vaccines in the NIP schedule, across all municipalities. Considering some of the performance challenges Colombia’s NIP faces (as detailed above), the specific targets to set for providers should aim to:

- Address coverage disparities across municipalities
- Address coverage gaps across NIP vaccines for adolescents and adults (HPV, HepA, Influenza, Td, Tdap, or any future introductions)
Table 2. Potential Indicators to Consider for Immunization Performance Improvement

<table>
<thead>
<tr>
<th>Potential Indicator</th>
<th>Intended Outcome</th>
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<tbody>
<tr>
<td>Coverage of all vaccines in the NIP</td>
<td>Increase coverage of the entire schedule</td>
</tr>
<tr>
<td>Coverage of (x) vaccine (x relating to a vaccine further down the life-course)</td>
<td>Improve coverage for adults</td>
</tr>
<tr>
<td>Access to complete local immunization registries/ PAIWEB implemented at all IPS&lt;sup&gt;18&lt;/sup&gt;</td>
<td>Promotes information exchange between sub-national governments and EPS</td>
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Figure 5. Current vs. Future Design of Service Provider (IPS) Performance-Based Financing

Additional design elements for the PBF mechanism under article 241 of Law 1955 need to be thought through in order to ensure cohesion with the existing Colombian system and the success of its intended outcomes. An initial approach to the design elements of article 241 should consider:

- **Coordination:** Both EPS service providers and sub-national governments implement the national immunization program, but they currently work with limited coordination. To improve program performance and efficiency, any new incentive system should consider how to improve coordination between these two critical elements.

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<sup>18</sup> NIP Immunization Reporting System.
agencies required for immunization program delivery and support. The new mechanism should also consider how it coordinates with existing PBF mechanisms for both service providers and sub-national governments.

- **Consistency**: The current PBF system for EPS service providers is piece-meal. Some EPS choose to pay a fee-for-service payment to their providers for vaccination outputs. Others provider bonus payments if their providers reach set coverage targets for specific population groups (children and maternal). Still, the majority of EPS have no PBF mechanism in place and purchase immunization service delivery through the primary care capitation payment. The new mechanism should promote consistency across all EPS in how they incentivize immunization service delivery. This will help to promote stronger coverage rates across geographies and vaccines.

- **Incentive Level**: With all of the priorities that exist within a mature and complex system, providing an incentive that actually encourages a behaviour change can be challenging. To make a serious effort at promoting preventative service activities, the payment rate must be calculated in a way that actually provides an incentive to providers.

- **Valid data**: When providing payments based on performance, the Colombian system must have reliable data on which to judge performance. For immunization, the roll-out of PAIWEB creates a comprehensive platform on which to capture and share data. Use of this system should be promoted for the benefit of the immunization program across all NIP actors.