Overview of the ProVac Initiative
Goal of the ProVac Initiative

Strengthen evidence-based decision making on immunization to sustain and further the public health impact of immunization programs.
ProVac’s objectives

1. Develop tools and methods to support evidence-based decision making on immunization
2. Provide training to national multidisciplinary teams on tools and methods for evidence-based decision making on immunization
3. Generate evidence by providing direct technical support to national teams and groups responsible for making immunization policy recommendations

ProVac’s areas of work

1. Economics of new vaccine introduction
2. Performance optimization of immunization programs
3. Post-introduction evaluation of vaccine impact
4. Strengthening of National Immunization Technical Advisory Groups (NITAGs) and PAHO’s regional Technical Advisory Group on vaccine-preventable diseases (TAG)
What makes ProVac unique?

- ProVac does not only provide technical support to countries, but also builds in-country technical capacity by bringing together local experts from the ministries of health, other governmental agencies and academic centers.

- ProVac’s approach to preparing and facilitating national economic analyses promotes country ownership of the process and of the findings. The end result is evidence-based decision making that is more likely to sustain the public health impact of the immunization program.

- The ProVac team is characterized by its technical expertise in economics, epidemiology and decision-support modeling. The team also has a deep understanding of the challenges faced by low and middle income countries when trying to make informed and timely immunization policy decisions. It includes members from PAHO’s technical officers on immunization, the London School of Hygiene and Tropical Medicine (LSHTM), and the Center for Health Decision Science at the Harvard School of Public Health, as well as academic institutions in the Region of the Americas.

- ProVac models and tools are currently open access resources and have been used in partner collaborations to support countries in other regions of the world.
ProVac supports evidence generation to inform key immunization policy and programmatic decisions:

**Before vaccine introduction**
- Estimation of disease burden and associated costs
- Modelling incremental vaccine benefits, risks, and costs
- Cost-effectiveness analysis (CEA)
- Budget impact analysis

**After vaccine introduction**
- Post-introduction evaluation of vaccine impact [health and economic]

**Key achievements**

- **Training and direct technical support** to countries for over 10 years
- **300** participants from 25 countries were trained through **regional workshops** on vaccine economic evaluations
- **43** Country-level vaccine cost-effectiveness analyses
- **4** program costing studies
- **20** NITAGs strengthened through direct support

**TIMELINE**

At any point:
- NITAG strengthening
- Immunization program costing
- Program performance optimization
ProVac is a PAHO-based initiative that provides training and direct support to countries for national data collection and analyses in addition to conducting regional desk-based analyses. Although the initiative primarily focuses on countries of the Americas, tools and lessons learned have been shared with other regions of the world.
### Specific activities ProVac supports

#### ProVac’s objectives

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#### Economics of new vaccine introduction

- Cost-effectiveness of new vaccines (UNIVAC model)
- Includes estimation of disease burden, incremental program costs, potential disease costs averted.

#### Performance optimization of immunization programs

- Total immunization program costing (COSTVAC tool)
- Methods to evaluate strategies for vaccination coverage improvement.

#### Post-introduction evaluation of vaccine impact

- Guidance documents and standardized protocols for the evaluation of epidemiologic and economic impact.

#### TAG strengthening

- Guidance documents on processes and methods for evidence synthesis for NITAGs and the Regional TAG
- Exchanges between NITAGs
- Trainings around evidence synthesis
- Support for evidence synthesis

### ProVac’s areas of work

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#### Performance optimization of immunization programs

- Workshops on the above topics.
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#### Post-introduction evaluation of vaccine impact

- Workshops on the above topics.
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- Country support for CEAs.
- Country support for immunization program costing, and efficiency studies.
- Country support for study implementation.

- Desk-based exercises to inform price negotiation, opportunity costs, regional recommendations.
- Desk-based exercises to inform regional recommendations.
- Desk-based exercises to inform regional recommendations.

- Country support for study implementation.
- Desk-based exercises to inform regional recommendations.
- Desk-based exercises to inform regional recommendations.
Examples of questions ProVac helps answer

- **Cost-effectiveness**
  Is it cost-effective to introduce vaccine X in my country?
  Is substituting vaccine X for Z cost-effective in my country?
  Is reducing vaccine X’s schedule from 3 to 2 doses a cost-effective strategy?

- **Performance optimization**
  What is the total cost of the current immunization program in my country?
  What are the bottlenecks in achieving optimal program performance?
  Is X or Y a more cost-effective strategy for improving vaccination coverage in my country?

- **Post-introduction impact**
  What is the epidemiologic and economic post-introduction impact of vaccine X in my country?
  What are the broader economic benefits of the introduction of vaccine X?

- **Evidence synthesis and advisory body strengthening**
  How do I conduct evidence synthesis to inform decision making on new vaccine introduction?
  How do I document an evidence-based decision process?

The ProVac e-Toolkit

The ProVac e-Toolkit is an open-access repository for all finalized models, tools, guidelines, and publications relevant to the work of ProVac. It is used by partners, academics and other researchers. It can be accessed at:

www.provac-toolkit.com
Partners and collaborators:

- London School of Hygiene & Tropical Medicine
- Federal University of Goiás, Brazil
- PATH
- Harvard T.H. Chan School of Public Health
- Center for Health Decision Science
- CDC
- Bill & Melinda Gates Foundation

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