

The study was conducted as part of a multi-country analysis of the costing and financing of Routine immunization and new vaccines (EPIC) supported by the Bill & Melinda Gates Foundation

Policy Brief

Key Issues to Consider for Sustainability of the National Immunization Program When Graduating from GAVI Support

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Rationale

In 2016, Moldova, along with 19 other countries, is scheduled to graduate from GAVI Alliance's financial support [1]. Therefore, it is crucial to plan and manage the transition in order to maintain the financial sustainability of the National Immunization Program. Adequate planning for transition and mobilization domestic resources to ensure financial sustainability of the immunization program requires better knowledge of the full economic and financing costs of the routine immunization program and costs of new introduction.

Purpose of the study

The purpose of this study was to generate new information to help: a) improve the planning of resource requirements and financing needs at the country level; b) improve the understanding of the delivery costs associated with the introduction of a new vaccine and c) contribute to updating GAVI Alliance policies on new vaccine introduction support.

Methods

This was a cross-sectional facility-based costing study that looked at the costs and financing of a routine immunization program and evaluated the incremental cost and financing of the new vaccine introduction in Moldova. The study employed a multi-stage random sampling to select fifty health care providers from 1,318 facilities involved in delivery of immunization services in Moldova across 37 districts.

The sample included: 8 urban/peri-urban facilities and 42 rural facilities represented by 5 Family

Medicine Centres (FMC) that are largest facilities serving between 40,000 to 80,000 inhabitants, 10 Health Centres (HC) serving at least 4,500 inhabitants, 23 Offices of Family Doctors (OFD) serving between 900 to 3,000 population and 12 Health Offices (HO) organized in communities with fewer than 900 inhabitants. Therefore the findings of this study are representative on a national level. This study used retrospective costing approach for the routine Expanding Program for Immunization (EPI) and prospective costing approach for the Rotavirus, capturing all costs incurred six months prior to and six months following the date of the Rotavirus vaccine introduction. All local costs were converted into 2011 \$US using an average exchange rate of 11.73 MDL per dollar. Calculations undertaken by the study team were based on the common approach document developed for this multi-country exercise by the Bill and Melinda Gates Foundation[2], on cMYP Costing Guidelines [3] and WHO Guideline for Estimating Costs of New Vaccine Introduction [4].

Key

Figure 1 - Financial and Economic Cost of Rota vaccine Introduction

Result

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Total Cost of Rotavirus Vaccine Introduction

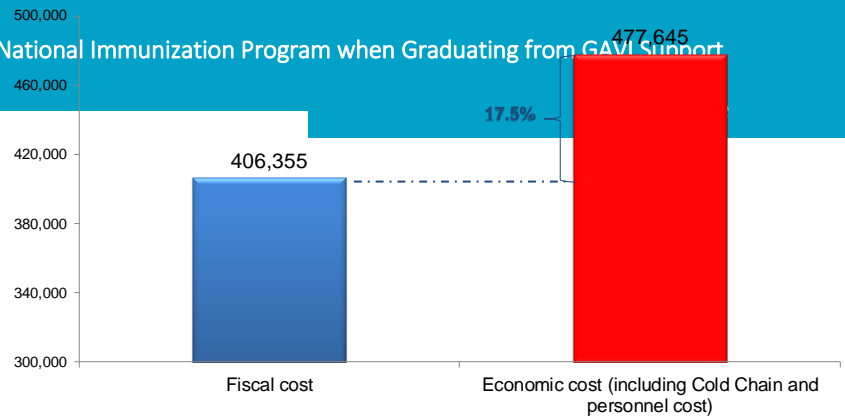
Our study revealed that the overall annual economic cost of the routine EPI was 9.86 million \$US and financial costs 9.47 million. Out of which, the largest share of funds were from the national

sources 94.8% and external sources collectively contributed only 5.2% and this was shared by GAVI 4.5%, by UNICEF - 0.2% and WHO - 0.5%.

Our study also revealed that the introduction of the Rotavirus vaccine in Moldova did not require the purchase of additional cold chain equipment, because the available spare capacity. Nor was additional staff added on a facility level to meet increased service delivery needs. Therefore the financial implication of the Rotavirus vaccine introduction in Moldova was marginal, and the financial costs of the vaccination resulted only in additional 378.8 thousand \$US on top of the EPI costs. However, had Moldova needed additional cold chain equipment and/or staff to deploy new vaccines in the system, these costs would have increased by almost 26% to pay for additional staff salaries as well as for additional cold chain equipment (Figure 1).

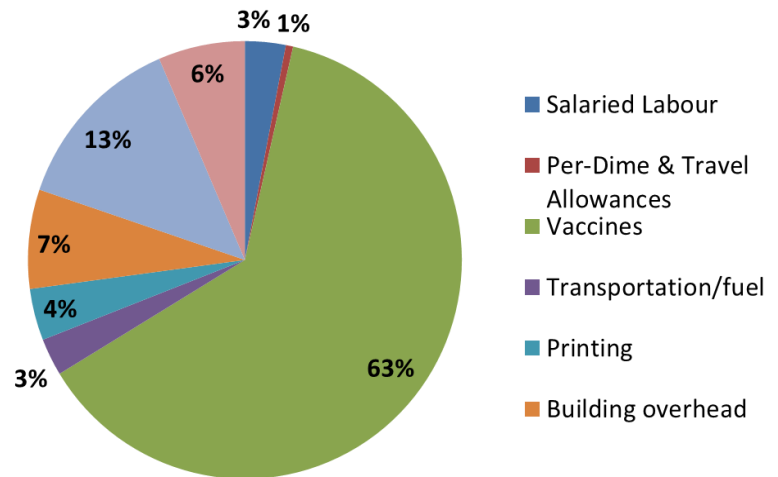
The study also revealed that out of the total incremental fiscal costs of the rotavirus vaccine introduction, only 151,489\$ (37%) were spent on immunization delivery and the remaining 63% were used for vaccine procurement. (Figure 2)

This indicates that the **cost of vaccines is the largest portion of the total incremental cost.**



Consequently, the price of a vaccine dose that is being considered for introduction is critical factor for making policy decisions. If the external sources in the overall funding for the national immunization

Figure 2 - Cost Drivers for the Rota vaccine cost



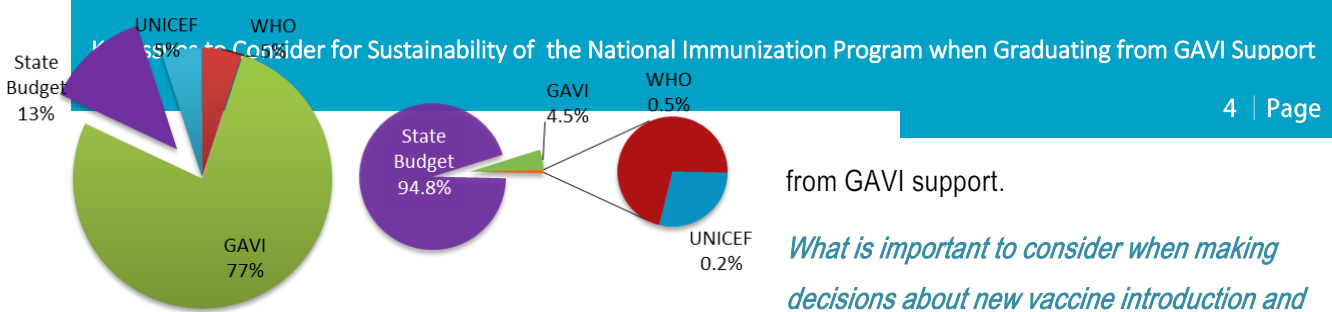
program was marginal (5.2%), for the Rotavirus vaccine introduction 77% of funds were provided by GAVI and 10.5% by UNICEF and WHO (Figure 3).

Figure 3 - Funding Sources for NUVI and EPI

The government was only responsible for providing 12.5% of the funds necessary for the new vaccine introduction.

Unit costs of Rotavirus vaccine Introduction

Furthermore, the study revealed that the fiscal cost per dose of the rotavirus vaccine introduction



from GAVI support.

What is important to consider when making decisions about new vaccine introduction and designing new policies?

(without vaccine) was \$1.94 and the cost per infant \$3.82 (Error! Reference source not found.). Our estimates for the incremental fiscal costs needed to introduce a new vaccine in the immunization program are 4.7 times higher compared to 80c currently paid by GAVI [5]. **These findings highlighted possible weaknesses in GAVI policies and call for a thorough re-evaluation in light of emerging new evidence.**

The study also shows that the economic cost of delivering a single dose of the vaccine increased to 6.11 \$US, and the cost per infant went up to 12.03 \$US (including vaccine costs), which is a 3.8% increase in the current estimated cost per infant of the national immunization schedule of \$316.6.

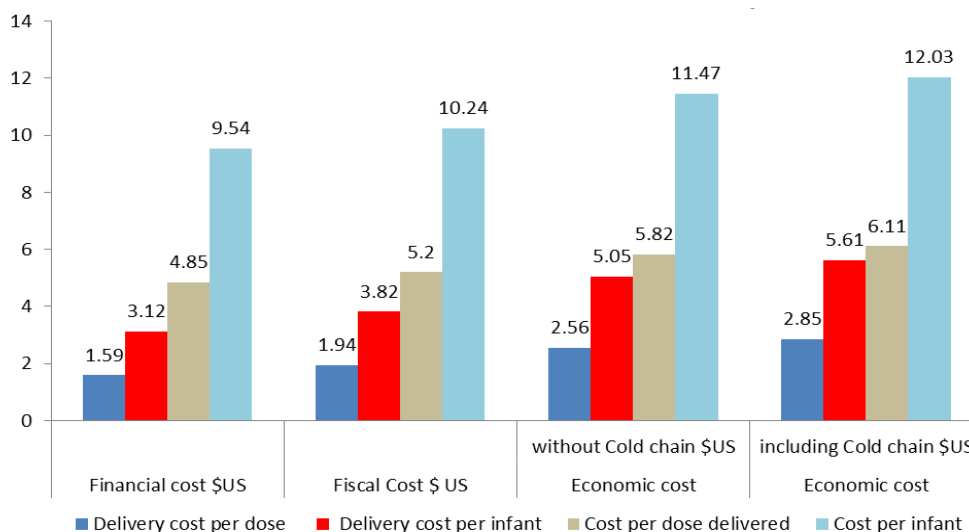
Main Policy Implications

The findings of our study provide critical information for discussing issues related to the affordability of new vaccine introduction in Moldova, and the financial sustainability of the national immunization program after it graduates

Firstly we have seen that when introducing new vaccines, the **actual cost of vaccines is the largest portion of the incremental cost. This does not make Moldova much different from other countries where the cost of new vaccines has been found to drive vaccine introduction costs up by as much as 60% [6].** Consequently, the price of a vaccine dose that is being considered for introduction is a **critical determinant for making policy decisions.**

Secondly, Moldova will graduate from the GAVI Alliance support in 2016, and the country is contemplating reforming its immunization program and decentralizing vaccine procurement responsibilities due to the nature of national public finance regulations. As the cost of vaccines is critical element of the immunization program it needs to be well managed. **Therefore the centralized model for vaccine procurement could be more effective, while decentralization of this function may drive vaccine prices up and could further increase overall program cost.**

Thirdly, even if centralized procurement is



retained after Moldova graduates from GAVI, vaccine prices could double because of national procurement rules that mandate local tendering¹. Therefore, for all non-UNICEF supplied vaccines, Moldova would pay almost double the UNICEF price [7]. If this happens, the cost of the immunization program may rise by almost 24.1%, which will be significant jump and may put the sustainability of vaccine financing at risk. The same happened in Bosnia & Herzegovina (B&H) when GAVI support ended in 2011, B&H was exposed to the open market, where vaccine prices were 5-20 times higher than UNICEF prices. This situation was compounded by a small market, fragmented procurement and low competition [8], which is also expected in Moldova unless centralized procurement is maintained and preferential access to UNICEF/GAVI negotiated prices are secured in medium to long-term perspective.

Consequently, before introducing new vaccines and further increasing the cost of the immunization program the government of Moldova should use the remaining time to identify potential impact of such decisions on the national budget and with or without the best vaccine procurement mechanisms², that would allow purchasing vaccines from UNICEF or at a comparable price.

Well-informed and negotiated decisions for new vaccine introduction will help minimize the future budget pressure after graduation and will assure sustainability.

¹Due to the small market size of Moldova with a population of 3.5 million and a small birth cohort, big vaccine manufacturers are not very interested in bidding in local tenders

²Allowing for purchases from UNICEF or for pulled procurement under national legislation, etc

What will be important factors to consider when graduating from GAVI support?

Based on our study findings the total cost of the immunization program amounts to only 2.4% of recurrent public financing for health. In such a fiscal context, graduating from GAVI seems affordable. However, as GAVI support is phased out, Moldova's co-financing is projected to rise from about US \$50 000 in 2011 to US \$ 1.1 million in 2016 [9], if current Rotavirus vaccine prices are secured and guaranteed by GAVI. For this the government needs to create the necessary budgetary space. This will be challenging as the percentage increase is significant. Moreover, looking at the financial sustainability of immunization programs in a silo without taking the broader, country-level fiscal context into consideration could be misleading.

After Moldova graduates from GAVI in 2016, due to New Funding Model introduced by the Global Fund [10] the country will also receive significantly reduced financing for its national HIV/AIDS and Tuberculosis programs. Currently both donors (GAVI and Global Fund) contribute significant shares to funding public health programs. The concurrent reduction/graduation from the Global Fund and GAVI is expected to increase pressure on the national budget significantly.

Based on preliminary estimates provided in the Medium Term Budgetary Framework for 2014-2016[11], Moldova expects that graduation from the GAVI and the Global Fund will increase demand for national budget for public health programs by 2.45 times in 2016 compared to 2011 levels.

Fiscal space analysis conducted during GAVI's co-financing policy revision flagged that limited fiscal space and weak economic growth prospects that could pose significant challenges for the government during the coming years and may put at risk adequate financing of the immunization, TB and HIV/AIDS programs [9]. Therefore Moldova may lose the health gains achieved thus far. These challenges do not look unique to Moldova

and many countries that are graduating from GAVI assistance and expecting funding reductions from TGF could be at similar risk.

Consequently, **careful evaluation and elaboration of graduation and/or co-financing policies across donors seems to be warranted to assure that achieved health gains are sustained and enhanced after countries graduate from donor assistance.**

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