Overview of Gavi Full Country Evaluations Findings

Mozambique

2013-2016

Summary of recommendations

General

- Provide short and succinct reference materials for new vaccines to health workers rather than wait for the National Immunization Programme manual to be updated. Factor these materials into the Vaccine Introduction grant budget.

National Immunization Programme

- With Centro de Medicamentos e Artigos Médicos and the Ministry of Health (MOH):
  - Identify and resolve customs-related problems that led to procurement delays for the 2016 vaccines.
  - Implement the Effective Vaccine Management recommendation to set up memoranda of understanding with customs and MOH clearing agents.
- With partners, ensure that supervision for new vaccine introduction occurs within three to six months of the launch of a new vaccine.
- Provide refresher training to immunization health workers, ideally embedded within the upcoming measles-rubella training, to clarify the measles second dose (MSD) vaccine target age group (18 to 24 months) and disseminate new strategies to improve MSD vaccine-seeking behavior.
- Adhere to Directorate of Planning and Cooperation and Ministry of Economy and Finance budget planning cycle deadlines and submit necessary activity plans and request documents on time.
- Consider the option of a no-cost extension (NCE) application in 2019 to make up for lost time caused by the delay in accessing Health System Strengthening grant funds. To ensure that the NCE application is timely, begin preparations and negotiations with Gavi in 2018.

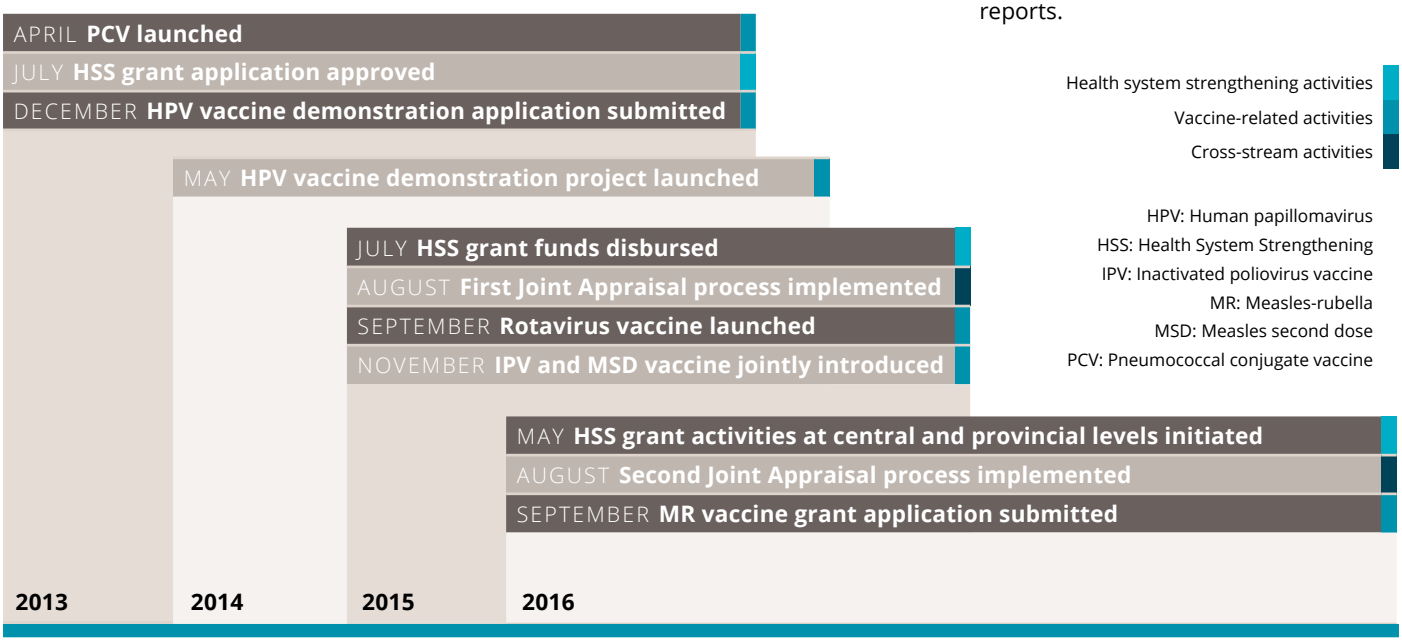
Partners

- Identify and improve procurement issues that result in delays.

Gavi Secretariat

- Ensure that the global supply of inactivated poliovirus vaccine is guaranteed for countries where it has already been introduced.
- Align with government fiscal cycles when disbursing cash grants to countries.
- Develop contractual mechanisms that guarantee that Partners' Engagement Framework Targeted Country Assistance commitments are honored.
- Guarantee timely signing of contracts and disbursement of funds to Partners' Engagement Framework stakeholders.
- Gavi policy should have the flexibility of accepting NCE preparations and negotiations earlier than the last year, after careful monitoring of progress through the Joint Appraisal and other reports.

Key activities



Health system strengthening activities
Vaccine-related activities
Cross-stream activities

HPV: Human papillomavirus
HSS: Health System Strengthening
IPV: Inactivated poliovirus vaccine
MR: Measles-rubella
MSD: Measles second dose
PCV: Pneumococcal conjugate vaccine

Introduction

PURPOSE

The Gavi Full Country Evaluations (FCE) was a prospective study from 2013 to 2016 in four countries: Bangladesh, Mozambique, Uganda, and Zambia. The study aimed to understand and quantify the barriers to and drivers of immunization program improvements, with a focus on the contributions made by Gavi, the Vaccine Alliance. This brief summarizes the key findings and recommendations from the 2013 to 2016 evaluation period in Mozambique, with an emphasis on the 2016 recommendations that are most timely, relevant, and actionable.

GAVI SUPPORT

Mozambique first received Gavi support in 2001. Over the next 16 years, Gavi provided funding for new vaccine introductions, health system strengthening, and other related activities (see Table 1).

TABLE 1: GAVI SUPPORT IN MOZAMBIQUE, 2001-2017[1]

TYPE OF GAVI SUPPORT	PERIOD	TOTAL AMOUNT OF FUNDING ($US)
Immunization Services Support grant	2001–2003, 2011	1,665,500
Injection Safety Support grant	2003–2005	835,881
Tetra DTP-Hepatitis B	2001–2007	16,897,320
Pentavalent vaccine	2009–2017	46,627,780
Pneumococcal conjugate vaccine	2013–2017	75,214,231
Human papillomavirus vaccine demonstration	2014–2016	56,503
Health System Strengthening grant	2014–2018	25,041,767
Rotavirus vaccine	2015–2018	16,426,652
Measles second dose vaccine	2015–2018	1,688,000
Inactivated poliovirus vaccine	2015–2017	5,190,562

DTP: diphtheria-tetanus-pertussis.

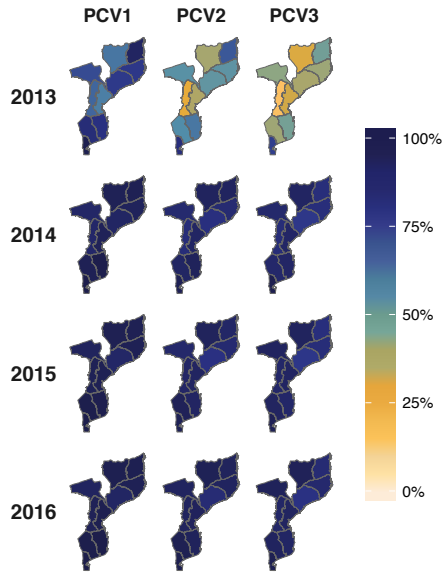
New Vaccine Introductions

PNEUMOCOCCAL CONJUGATE VACCINE

APRIL 2013 **PCV launched**

Pneumococcal conjugate vaccine (PCV) has largely been routinized into the immunization system in Mozambique (see Figure 1). While other vaccines suffered stockouts in 2016, PCV buffer stocks already present in the system counteracted vaccine arrival delays at the national warehouse and provincial shortages.

FIGURE 1: ROUTINIZATION OF PCV IN MOZAMBIQUE, 2013–2016



PCV1, PCV2, PCV3: vaccine doses 1, 2, 3.

[1] *Source: http://www.gavi.org/country/all-countries-commitments-and-disbursements, accessed last November 21, 2016. Values shown represent Gavi commitments, those which Gavi intends to fund over the lifespan of the program, subject to performance and availability of funds.*

MOZAMBIQUE PCV EFFECTIVENESS

There was an estimated 44% reduction (95% confidence interval: 33 to 59%) within 18 months in vaccine serotype pneumococcal nasopharyngeal carriage among human immunodeficiency virus (HIV)-uninfected children who received three doses of PCV; after 30 months, there was an observed 70% reduction (95% confidence interval: 57 to 78%). A 60% reduction (95% confidence interval: 25 to 95%) was observed in HIV-infected children who received three doses of PCV after 18 months with no additional decline at 30 months. There was an early signal of an indirect effect of PCV introduction among HIV-infected children who did not receive PCV doses. As expected, there was also an increase in non-vaccine serotype pneumococcal carriage.

ROTAVIRUS VACCINE AND INACTIVATED POLIOVIRUS VACCINE

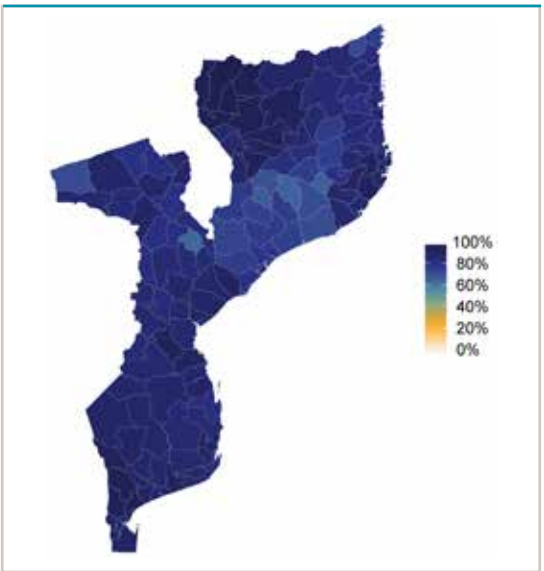
2012	**Rotavirus vaccine first application submitted (joint with MSD vaccine)**
JANUARY 2014	**Rotavirus vaccine second application submitted (joint with MSD vaccine)**
AUGUST 2014	**IPV application submitted**
NOVEMBER 2014	**IPV application approved**
NOVEMBER 2015	**Rotavirus vaccine launched (also with MSD vaccine)**

Rotavirus vaccine, inactivated poliovirus vaccine (IPV), and measles second dose (MSD) were successfully introduced in 2015 due to experience and lessons learned from previous vaccine introductions (pentavalent in 2009; PCV in 2013) and high political will and commitment. However, during the first months of 2016, routinization of the rotavirus vaccine and IPV was suboptimal because of vaccine stockouts (see Figure 2). Causes included:

- Late arrival of first-quarter vaccine consignments.
- Customs clearance challenges which protracted the procurement process.
- Lack of regional warehouses in the central and northern regions. (Planned construction of regional warehouses was delayed because of late execution of the Health System Strengthening grant.)
- Insufficient air transport capacity to deliver stock to central and northern regions.
- Global supply shortages of IPV. Mozambique received only six months of consignments in 2016 and may be forced to suspend IPV administration if shortages continue.

> *There is a global problem of the availability of IPV. It is true that when we were informed of the existence of this global problem, we were also informed that Mozambique would be one of the priority countries so it would not be affected much, but there were consistent delays in the arrival of the vaccine, and that influenced the issue of vaccine availability in the provinces.*
>
> **—National Immunization Programme Key Informant Interview 2016**

FIGURE 2: 2016 TOTAL COMBINED COVERAGE OF PCV, IPV, AND ROTAVIRUS VACCINE



2016 Recommendations

National Immunization Programme: With Centro de Medicamentos e Artigos Médicos and the MOH:

- Identify and resolve customs-related problems that led to procurement delays for the 2016 vaccines.
- Implement the Effective Vaccine Management recommendation to set up memoranda of understanding with customs and MOH clearing agents.

Partners: Identify and improve the procurement issues that result in delays.

Gavi Secretariat: Ensure that the global supply of IPV is guaranteed for countries in which it has already been introduced.

MEASLES SECOND DOSE VACCINE

JANUARY 2014 **MSD vaccine second application submitted (joint with rotavirus vaccine)**

NOVEMBER 2015 **MSD vaccine introduced (joint with IPV vaccine)**

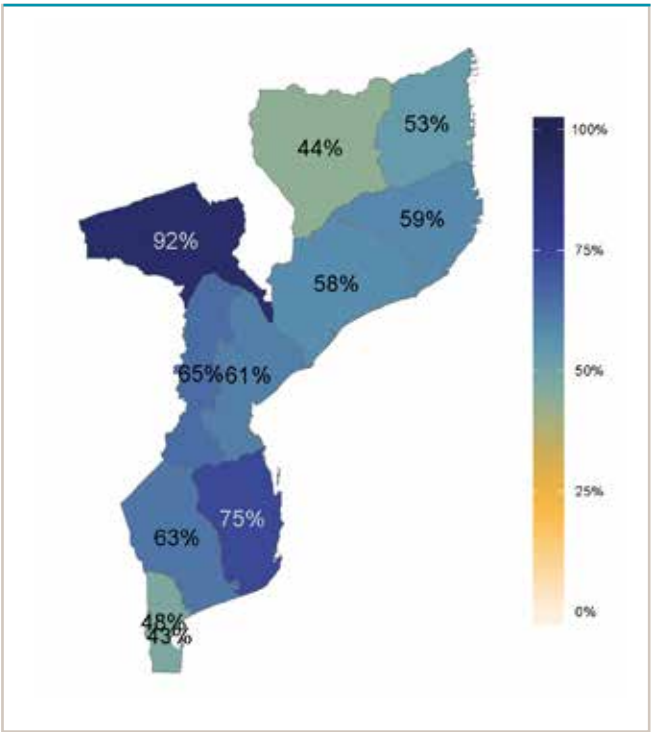
Since the MSD vaccine was introduced, coverage has remained at far less than the target 80%, though an increase in routinization was seen toward the end of 2016 (see Figure 3). Reasons for low coverage include:

- The target age group for the MSD vaccine does not follow the routine childhood immunization schedule and caregivers were unaware of the need to bring in their children for this vaccine.
- Health care workers understood to target only children who were 18 months instead of 18 to 24 months, missing the opportunity to vaccinate eligible children.
- The National Immunization Programme manual, which is the usual reference document for health workers, has not been updated since 2009 and does not contain information on all the new vaccines, including MSD vaccine.
- No national-level supportive supervision accompanied the introduction of the new vaccine.

Previously, [the routine vaccine visit] was 9 months of age and the mother did not have to return. Now she has to come back at 18 months to get the vaccine. We did social mobilization [for MSD vaccine] through the media, posters, radio spots, and even informing health professionals, but perhaps we should have had social mobilization for longer in order for them to incorporate this information and for it to become a habit. I think this was one of the main factors [in low coverage rates].

—National Immunization Programme Key Informant Interview 2016

FIGURE 3: MSD VACCINE COVERAGE BY PROVINCE IN MOZAMBIQUE, SECOND SEMESTER 2016



2016 Recommendations

General: Provide short and succinct reference materials for new vaccines to health workers rather than wait for the National Immunization Programme manual to be updated. Factor these materials into the Vaccine Introduction grant budget.

National Immunization Programme: With partners, ensure that supervision for new vaccine introduction occurs within three to six months of the launch of a new vaccine.

National Immunization Programme: Provide refresher training to immunization health workers, ideally embedded within the upcoming measles-rubella training, to clarify the MSD vaccine target age group (18 to 24 months) and disseminate new strategies to improve MSD vaccine-seeking behavior.

HUMAN PAPILLOMAVIRUS VACCINE

SEPTEMBER 2012 **HPV vaccine demonstration grant application for three districts (Manhiça, Manica, and Mocímboa da Praia) not approved**

JANUARY 2014 **Second application for one district (Manhiça) approved**

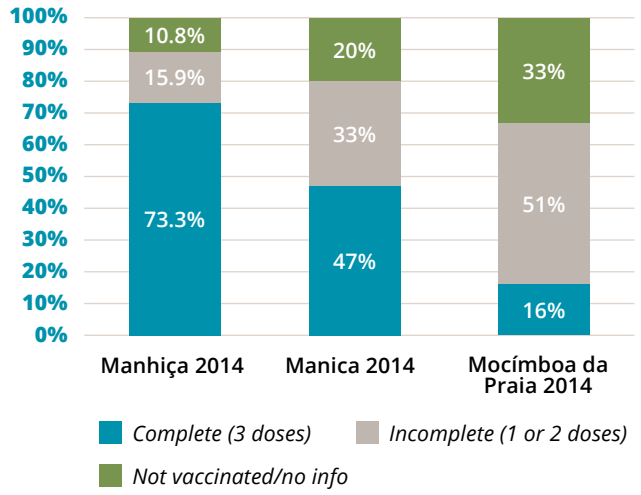
MAY 2014 **Demonstration project started**

2018 **National introduction planned**

Manhiça district has relatively favorable implementation conditions, and the human papillomavirus (HPV) vaccine demonstration project was successful in reaching Gavi coverage criteria. The government of Mozambique later included Manica and Mocímboa da Praia in the demonstration project using its own funding. Coverage in these districts was notably lower due to challenges with demand generation and community mobilization (see Figure 4).

Stakeholder consensus is that the national rollout of the HPV vaccine should move forward in a stepwise fashion using school-based, facility-based, and community-based campaign delivery models.

FIGURE 4: MOZAMBIQUE HPV VACCINE DEMONSTRATION PROJECT COVERAGE, 2014



Health System Strengthening

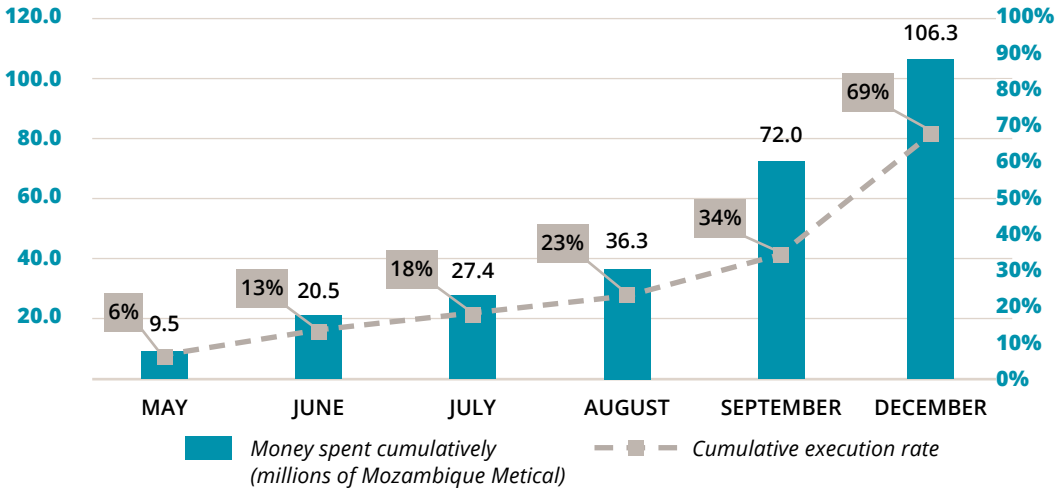
JULY 2013	**HSS grant application approved**
OCTOBER 2014	**Year 1 plans submitted**
JULY 2015	**First-year grant funds disbursed to Ministry of Economy and Finance**
APRIL 2016	**Grant funds became accessible to MOH and implementation began**

Implementation of the Health System Strengthening (HSS) grant was delayed for several reasons:

- The first-year cash disbursement was made two years after approval due to negotiations on the financial management requirements.
- Prioritization of new vaccines and ongoing communication challenges occurred due to turnover at both the National Immunization Programme and Gavi Secretariat.
- Financial management requirements obligated commitment and sign-off by the Finance Department and other senior levels within the MOH, as well as the involvement of other ministries.
- After HSS funds arrived in country, they were not accessible to the MOH for nine months. Errors were made in the September 2015 inscription request from the MOH to the Ministry of Economy and Finance.
- Provinces needed to develop activity plans aligned with the HSS Year 1 work plan; however, some provinces did not meet the January 2016 deadline.

The MOH reported an 11% execution rate in the Joint Appraisal at the end of the first year of HSS grant implementation. In the second half of 2016, the MOH prioritized HSS and made significant efforts to accelerate activity implementation. The budget execution rate increased to 34% in September 2016 and 69% in December 2016 (see Figure 5).

FIGURE 5: HSS GRANT BUDGET EXECUTION IN MOZAMBIQUE, MAY-DECEMBER 2016



2016 Recommendations

Gavi Secretariat: Align with government fiscal cycles when disbursing cash grants to countries.

National Immunization Programme: Adhere to Directorate of Planning and Cooperation and Ministry of Economy and Finance budget planning cycle deadlines and submit necessary activity plans and request documents on time.

National Immunization Programme: Consider the option of a NCE application in 2019 to make up for lost time caused by the delay in accessing funds. To ensure that the NCE application is timely, begin preparations and negotiations with Gavi in 2018. Gavi policy should have the flexibility of accepting NCE preparations and negotiations earlier than the last year, after careful monitoring of progress through the Joint Appraisal and other reports.

MACROECONOMIC CHALLENGES AFFECTING HSS GRANT IMPLEMENTATION

In April 2016, the International Monetary Fund (IMF) and most other donors suspended aid disbursements, following an IMF announcement that the government of Mozambique had not declared more than US$1 billion in government debts. This announcement resulted in significant budget deficits. Additionally:

- The government froze funds while the budget was adjusted.
- Inflation rose from 6.5% to 16.5%, making the Gavi HSS grant budget inaccurate and insufficient.
- Supervision visits were postponed and the government could no longer pay customs duties on motorbikes and trucks purchased with HSS grant funds.

Initially, local stakeholders hoped they could simply reallocate funds to address shortages, rather than go through formal reprogramming; however, in late November, the senior country manager determined that reprogramming was required because of the impact of inflation on the budget.

> *With gross domestic product dropping from 7.5% to 4.5% and currency deflation (inflation increasing from 6.5% to 16.5%), the purchasing power has reduced. One of the measures we have taken is the review of the 2016 government budget for all sectors, which has taken the name of the rectified budget. In this review, routine activities, current consumables, new construction, and visits to the field were reduced by 20%.*
>
> **—MOH Key Informant Interview 2016**

Cross-Stream Analysis

JOINT APPRAISAL AND TECHNICAL ASSISTANCE

AUGUST 2015	**First JA process implemented**
AUGUST 2016	**Second JA process implemented**

In 2015, the Joint Appraisal (JA) included a new approach for identifying technical assistance (TA) needs and informing TA funding through the new Partners' Engagement Framework, which is meant to increase transparency and accountability of Gavi TA. In 2015 the JA process was resource-intensive and suffered from a lack of clarity on roles of actors and uncertainty on how TA needs should be identified. Improvement in the 2016 JA process led to stronger alignment between the National Immunization Programme and partners on where to focus efforts to improve grant performance.

2016 Recommendations

- **Gavi Secretariat**: Develop contractual mechanisms that guarantee that Partners' Engagement Framework Targeted Country Assistance commitments are honored.
- **Gavi Secretariat**: Guarantee timely signing of contracts and disbursement of funds to Partners' Engagement Framework stakeholders.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