



# Mozambique

2017-2018

The Gavi Full Country Evaluations (FCE) are mixed-methods, prospective evaluations in Mozambique, Uganda, and Zambia, funded by Gavi, the Vaccine Alliance. The second phase of the FCE (FCE2) implemented from 2017-2019 aims to identify drivers of vaccine coverage and equity with an emphasis on Gavi's contribution. Evaluation results are intended to support the ongoing learning and improvement of Gavi and national immunization programs. The implementation of FCE2 is guided by a number of principles to ensure the usefulness, relevance, and quality of FCE2's findings and the sustainability and transferability of the platform beyond FCE2. In Mozambique the FCE is implemented by Universidade Eduardo Mondlane & Health Alliance International.



Photo: PATH

This brief summarizes the findings from the first report of Gavi FCE Phase 2. Full reports are available at <https://www.gavi.org/results/evaluations/full-country-evaluations/>.

## METHODS

*The Gavi FCE triangulates multiple sources of data to answer pre-determined evaluation questions. To generate the evidence and findings presented here we used:*

- **Document review:** Joint Appraisal report, HSS workplans, national health policies and strategies
- **Meeting observations:** EPI technical working group meetings, supply and logistics meetings.
- **Key informant interviews and fact checking interviews**
- **Statistical analysis:** DHIS2 monthly data (2013-2017), HSS budgets and expenditures.

## Key immunisation activities evaluated

- Routine vaccination, with a focus on coverage and equity
- Implementation of Gavi HSS support, including the role of partners
- Programmatic learning and decision-making
- The switch from PCV10 to PCV13

## SUMMARY OF RECOMMENDATIONS

- 🎯 **Act now:** MISAU and partners should maintain focus on community involvement, especially in hard-to-reach areas, including through mapping of hard-to-reach communities, education on the importance of vaccination, and active outreach of under-vaccinated children.
- 🎯 **Act now:** MISAU and partners should fully implement the REC strategy as soon as possible to ensure coverage of areas currently under-served.
- 🎯 **Act now:** MISAU and other relevant government authorities should improve communication between the central and provincial level to strengthen the coordination and allocation of support to areas in greatest need.
- 🔍 **Study further:** MISAU should reprogram the HSS budget in order to increase the proportion allocated to management activities and those at the community level.
- 🎯 **Act now:** In planning for future activities, the EPI program (PAV) should take into account lessons learnt from previous activities in relation to the time taken to transfer funds from MEF to MISAU.

## Improvements in vaccine coverage

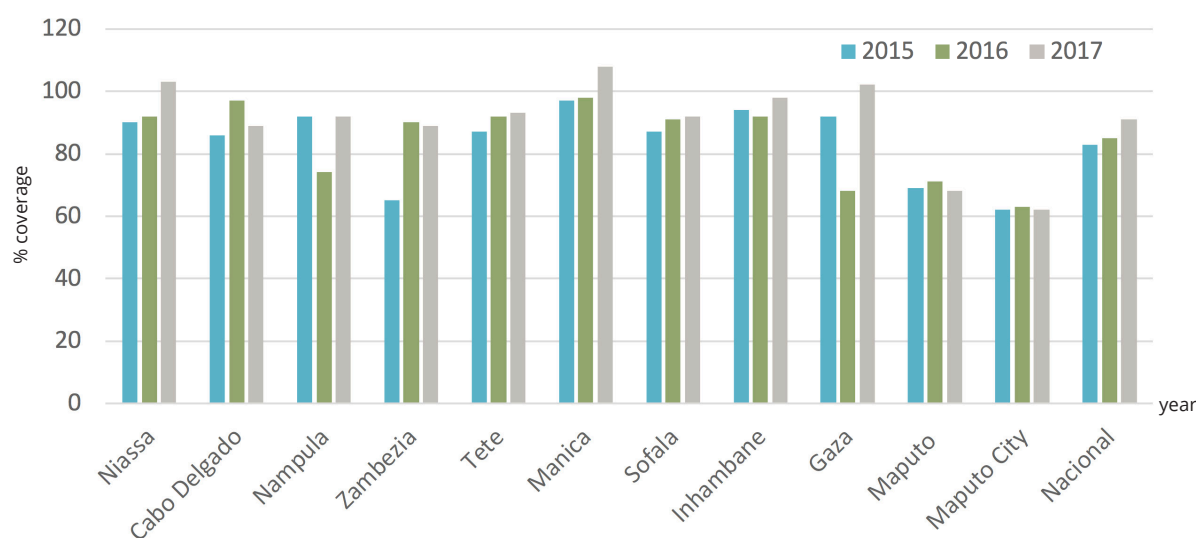
Routine data indicate that coverage of all vaccines (fully immunized child, FIC) increased from 2015 to 2017 with reductions in between-district inequalities.

FIC refers to those children who have received all doses of vaccines for all major vaccine preventable diseases, namely: polio, measles, tuberculosis, diphtheria, pertussis and tetanus. The analysis of the trends in the last 3 years indicate that there was an increase of

about 8 percentage points of FIC at national level from 2015 to 2017, this FIC coverage increase was higher from 2016 to 2017, an increase of 6 percentage points, whereas from 2015 to 2016 there was only a 2 percentage point increase. The increase in

2016 to 2017 reflects significant improvements of Gaza, Nampula, Niassa and Manica with 34, 18, 11 and 10 percentage point increments, respectively. WUENIC data register fewer improvements.

**Figure 1. FIC coverage by province, 2015, 2016, and 2017.**



Source: DHIS2

*The picture is different for IPV, which dipped to 30% national coverage in August due to stockouts. Stockouts at national level were also reported for BCG, OPV3, and TT vaccines. Reasons for stockouts are similar to previous years: global supply shortages (IPV) and domestic financing challenges (BCG, OPV, TT).*

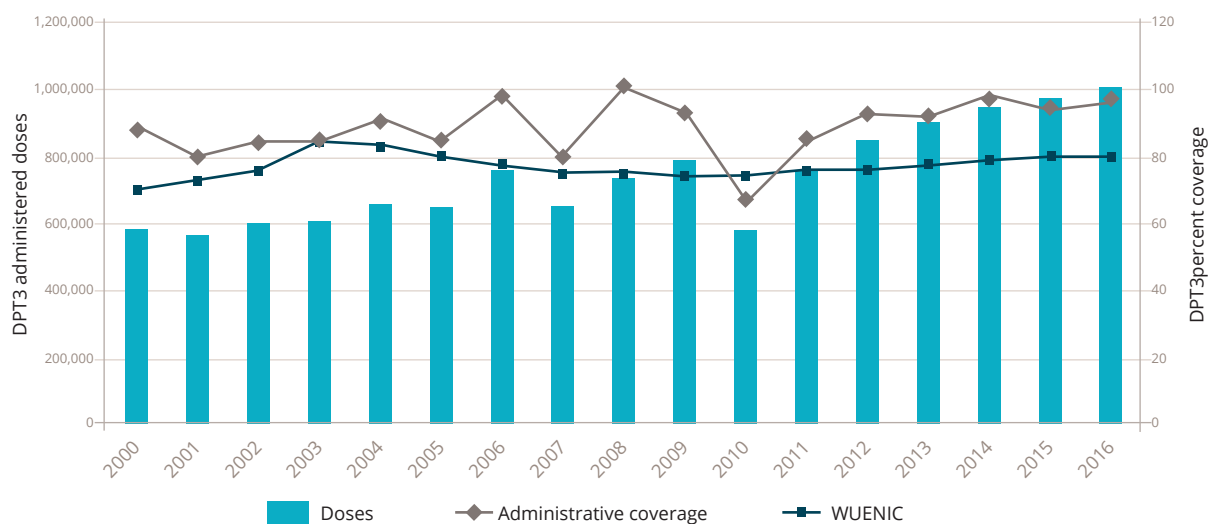


Photo: PATH

### Data quality

Poor quality of administrative data is a persistent issue. Often, administrative data even show coverage higher than 100%, which may be due to factors such as denominators problems, the poor quality of records, and provider workload, among other factors. However, administrative data can be useful in identifying monthly and sub-national trends.

Figure 2. DTP3 coverage: administrative and WUENIC estimates (2000-2016)



Source:

WHO/IVB database, data reported to WHO by Member States as of 15 July 2017.

WHO-UNICEF estimates of immunization coverage (WUENIC) as of 15 July 2017

[http://www.who.int/immunization/monitoring\\_surveillance/data/administrative\\_coverage.xls](http://www.who.int/immunization/monitoring_surveillance/data/administrative_coverage.xls)

[http://who.int/entity/immunization/monitoring\\_surveillance/data/coverage\\_estimates\\_series.xls](http://who.int/entity/immunization/monitoring_surveillance/data/coverage_estimates_series.xls)

## RECOMMENDATIONS

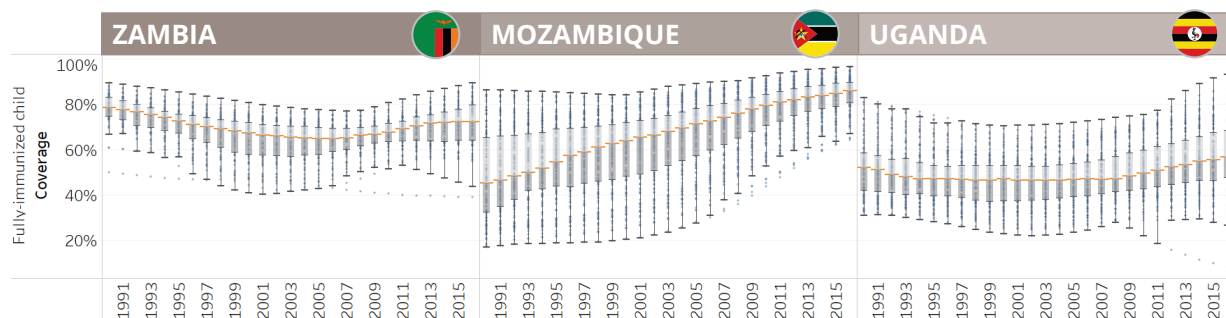
### ACT NOW

- MISAU and partners should maintain focus on community involvement, especially in hard-to-reach areas, including through mapping of hard-to-reach communities, education on the importance of vaccination, and active outreach of under-vaccinated children.
- MISAU and partners should fully implement the REC strategy as soon as possible to ensure coverage of areas currently under-served.

## Improvements in vaccine equity

Compared to other Gavi FCE countries, Mozambique has dramatically improved coverage inequalities between districts.

**Figure 3. District-level FIC coverage (1990-2016)**

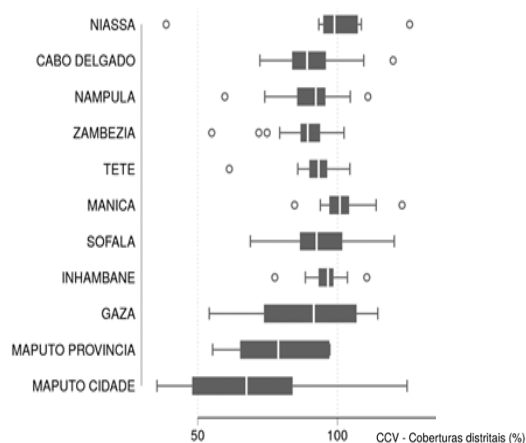


**Figure 4. District-level FIC coverage in Mozambique, by province (2017)**

Each box plot shows the spread of district-level FIC coverage within each province, representing between-district inequalities in coverage.

The majority of provinces show a relatively small spread, reflecting relatively low between-district inequalities in vaccine coverage.

Transferring lessons between high-performing and low-performing districts in the same province should be prioritized.



**Figure 5. Number of APEs (CHWs) in Mozambique (2010-2017)**

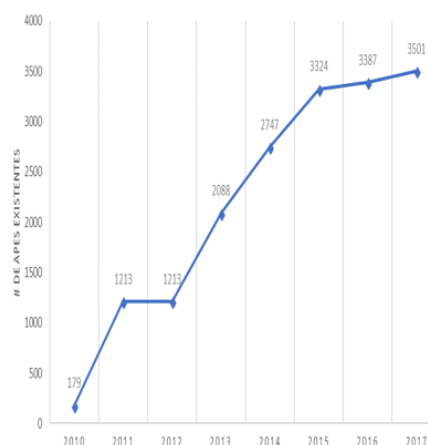


Figure 5 reflects the growth of APEs (community health workers, CHW) in Mozambique. One possible explanation for declining geographic inequalities could be the expansion of the community health worker program.

APEs contribute to vaccine coverage and equity by creating demand and shortening the distance between health facilities and communities.

### NEXT STEPS FOR YEAR 2

- Case studies will be conducted in selected districts to analyze and describe the drivers of coverage and equity at the lower levels;
- More accurate data analysis techniques, such as time series analysis, will be performed to better measure contribution of investments in health systems strengthening towards changes in vaccine coverage and equity.

## Switch from PCV10 to PCV13

The delay in the disbursement of funds from the Ministry of Economy and Finance (MEF) to the Ministry of Health (MISAU), the late arrival of PCV13 in the country and the delays in its distribution to the provinces were the factors that contributed to the successive adjustments to the plan for the switch from PCV10 to PCV13.

Mozambique introduced PCV10 vaccine in March 2013 as a response to the increasing cases of pneumonia in the country.

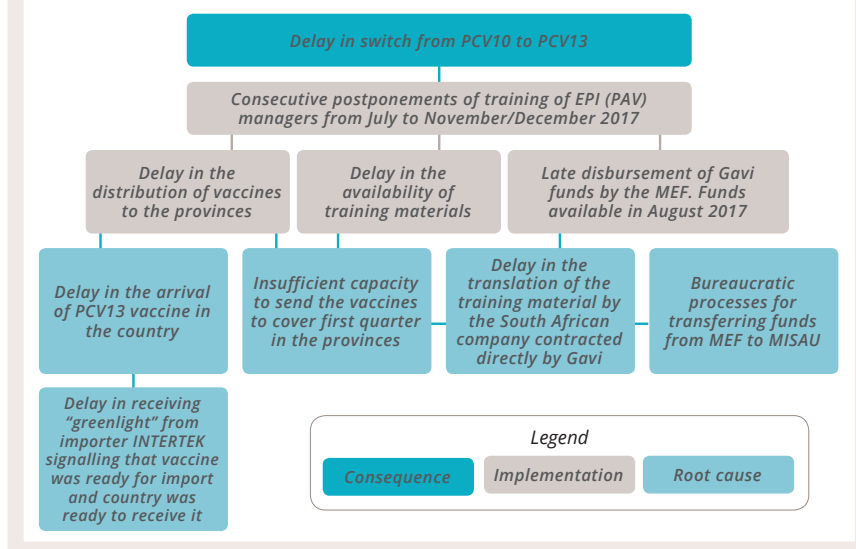
Three sentinel posts were established to monitor the results of the introduction of this vaccine, and a study led by the National Institute of Health was conducted to report the results.

A significant reduction of cases of pneumonia covered by the vaccine was reported; however, new pneumococcal strains not covered by PCV10 were emerging, so PCV10 switch to PCV13 became necessary;

The switch was initially planned to occur in three phases starting in July 2017, but it only started in December and only two phases were completed as of this report (May 2018).

There was a delay in the transfer of funds from MEF to MISAU. Funds were only available in August 2017 due to bureaucratic and time-consuming processes of transferring external funds from MEF to MISAU.

**Figure 6. Root cause analysis for the delay of PCV10/PCV13 switch**



PCV13 should have arrived in the country in June 2017 but only arrived in October of the same year. This delayed the training of EPI managers at all levels (provincial-district-health facility) and consequently two postponements of the initially proposed dates for the vaccine switch.

There were also constraints on the distribution of the vaccine to the northern and central regions, a recurrent problem that was analyzed in the FCE 2016 report. For these regions, the vaccine is transported from Maputo (capital) where the only national depot is located. Planned improvements to Mozambique's cold chain have been delayed due to HSS implementation delays.

## RECOMMENDATIONS

### ACT NOW

- In planning for future activities, the EPI program (PAV) should take into account lessons learnt from previous activities in relation to the time taken to transfer funds from MEF to MISAU.

### STUDY FURTHER

- Even with the construction of regional repositories in progress and the acquisition of refrigerated trucks to assist in the distribution of vaccines by land, the EPI program must study alternatives to minimize the constant lack of fuel (for lack of payment), since this has been a frequent cause of delays.



## What is the contribution of HSS to coverage and equity?

There was a significant improvement in the expenditure rate of Gavi HSS funds; however, to improve progress towards reducing inequities in coverage, the program should improve the proportion of funds allocated to community actions, to management, and to provinces and districts that are in greatest need.

- HSS funds have been implemented for two consecutive years, 2016 and 2017.
- Total HSS funds execution increased from just over 60% in 2016 to near 100% in 2017 after some reforms, such as strengthening the HSS management team and revised and more flexible approaches to addressing internal challenges.
- A health system with complex challenges characteristic of countries like Mozambique benefits from increased investment at the community level and on improved managerial performance.
- Certain types of activities, including procurement and cold chain, involve more barriers to fund execution due to their timelines, stakeholders required, and complex administrative processes. However delays in these activities may consequently cause delays in other activities that depend on procurement and cold chain. This has been observed in Mozambique.

*“Improved communication and coordination might lead to a more efficient use of resources and improved coverage results.”*

—Manager at MOH

**Figure 7. Comparison of funds execution between 2016 and 2017**

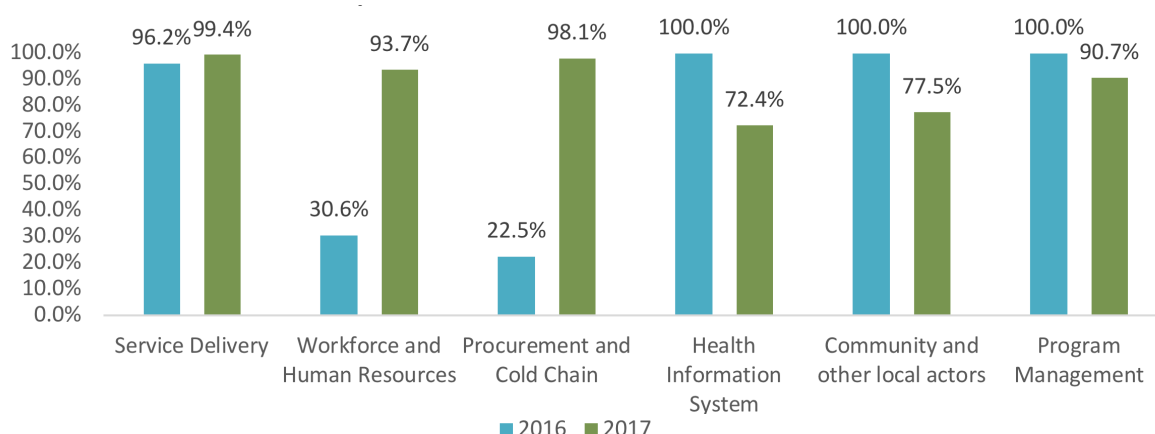
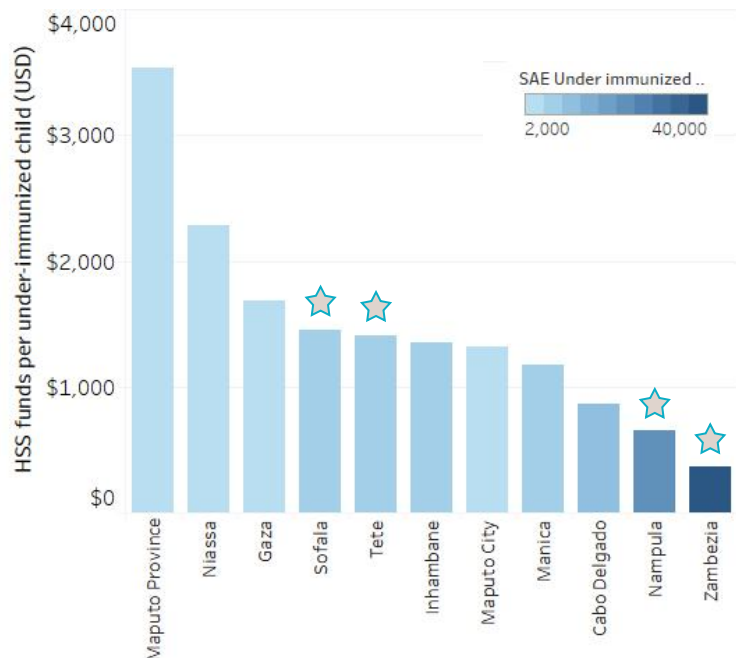


Photo: PATH

**Figure 8. HSS funds per under-immunized child, by province**



Mozambique identified four priority low-coverage provinces in its HSS proposal (starred in graph) to target. In reality, HSS funds are disbursed to all provinces. Priority provinces are not receiving resources based on need.



Photo: PATH

## RECOMMENDATIONS

### ACT NOW

- MISAU and other relevant government authorities should improve communication between the central and provincial level to strengthen the coordination and allocation of support to areas in greatest need.

### CONTINUE DOING

- Gavi, MEF, and MISAU should continue initiatives to enable the timely availability of funds to ensure the implementation of all budgeted HSS activities.
- MISAU, with Gavi's support, should continue with the district managers' capacity building plan to improve their planning skills and extend the MB Consulting support to the district level for financial management and reporting issues.

### STUDY FURTHER

- MISAU should reprogram the HSS budget in order to increase the proportion allocated to management activities and those at the community level.

## Conclusion

Findings from the report indicate that there has been a steady improvement in vaccine coverage over the past few years, coupled with a reduction in inequalities between districts within provinces. However, challenges persist that may interfere with the system's ability to sustain these gains, especially management and leadership challenges. HSS showed improvements in terms of the implementation of the funds that are disbursed directly to the government, and was very close to 100% expenditure for the year under review (2017). Reforms made at the beginning of the year were associated with the carry-over of funds from the previous fiscal year. Progress towards the introduction and routinization of new vaccines was the most challenged component, mostly due to the challenges of fragile systems, characterized by constant emergencies, often lacking the capacity for a prompt response.

### NEXT STEPS

**The FCE2 team will use additional data collection and analysis methods in year 2 to be able to get a better estimate of the contribution of HSS to observed changes in coverage and equity. The FCE2 team will expand the district case study approach to Mozambique and conduct research in two districts in a priority province, and two districts in a non-priority province to the contribution of factors such as community activities and leadership, management and coordination on vaccine coverage. Moreover, the team will focus efforts to document best practices of districts with good performance and investigate in greater depth the causes of coordination and communication challenges between the central and provincial levels. In partnership with EPI, the FCE2 team will discuss the proposed recommendations and approaches in order to identify initiatives able to respond to the challenges encountered, especially those that appear on a recurring basis, such as those associated with leadership, management and coordination.**

### ACKNOWLEDGEMENTS

The Mozambique FCE team would like to express its strong appreciation to a number of institutions and individuals who made their evaluation work possible in 2017-2018.

We thank all colleagues in the Ministry of Health who provided time, information and guidance. We also thank all EPI partners at the country level who in various ways facilitated the work of this evaluation, and provided support and oversight to this evaluation. Our thanks also go to health staff in the provinces that we visited in gathering data. Our thanks are also due to Gavi, the Vaccine Alliance, for the financial and technical support to this year's work. Particular appreciation to the M&E team, and Senior Country Manager for Mozambique, and to the Evaluation Advisory Committee for helpful comments on the report.

