

MOMENTUM

Country and Global Leadership



ZERO DOSE COUNTRY PROFILE: MADAGASCAR

July 2023



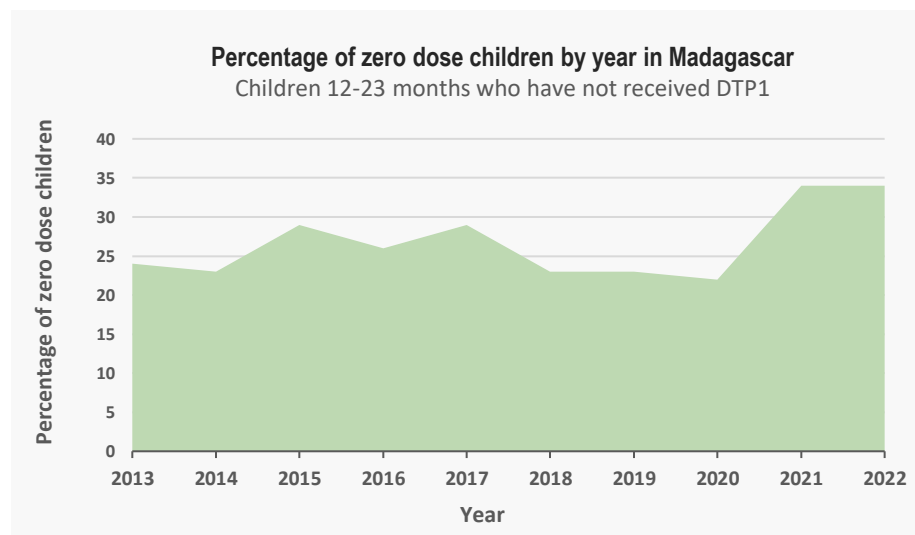
Photo credit: USAID

BACKGROUND

Immunization protects health and saves lives. Zero dose children are those who have not received any vaccinations. For operational purposes, zero dose children are defined as those who have not received a first dose of combined diphtheria-tetanus-pertussis (DTP1) vaccine. **In Madagascar, 34 percent of children 12–23 months of age are zero dose,**¹ and these children suffer a higher risk of poor health outcomes. Reaching zero dose children with immunizations can serve as a valuable opportunity to connect vulnerable children and communities with the health system. Improving equity by targeting children not yet reached by immunization systems will require adjusting existing approaches and identifying new and innovative strategies. It is important to understand the zero dose population in Madagascar, the barriers they face, and the tools that can be leveraged to reach them.

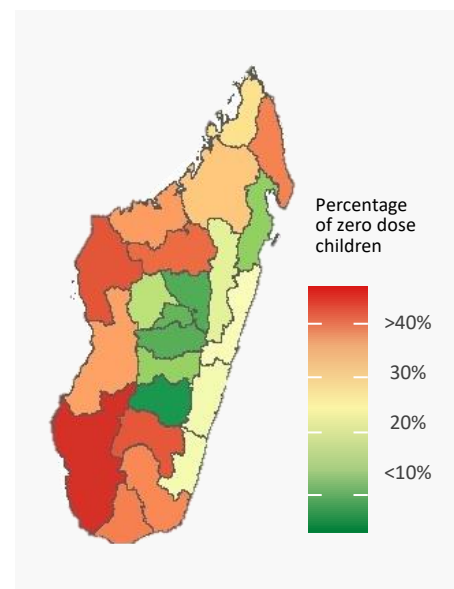
HOW MANY ZERO DOSE CHILDREN ARE IN MADAGASCAR?

There were approximately **449,000 zero dose children** in Madagascar in 2022.¹



WHERE ARE ZERO DOSE CHILDREN?

Prevalence of zero dose children
in Madagascar⁴



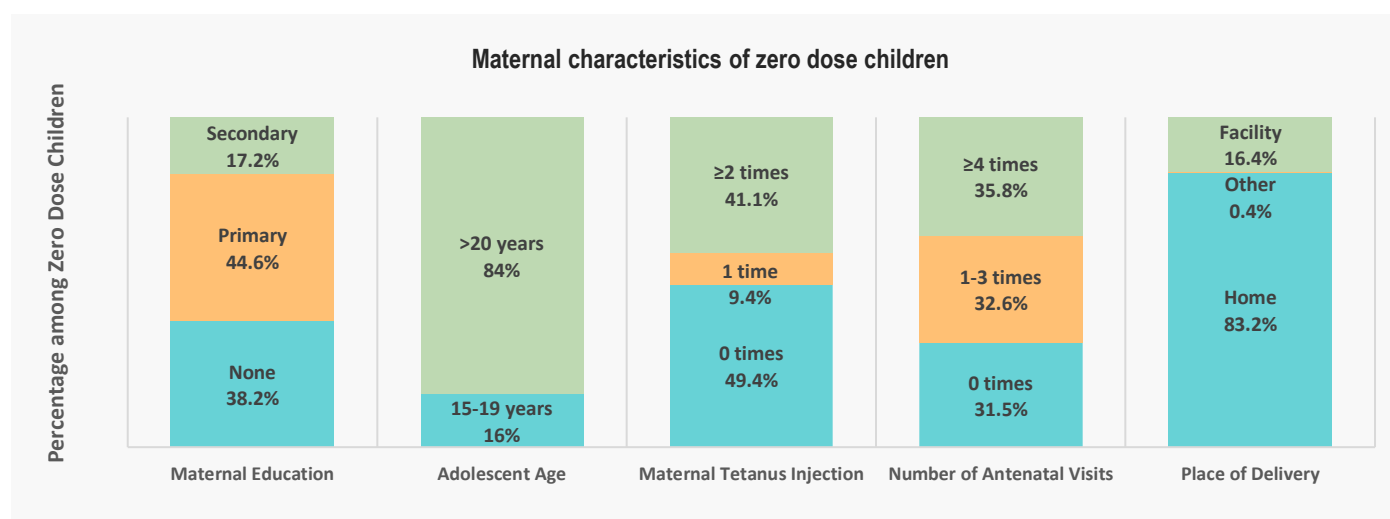
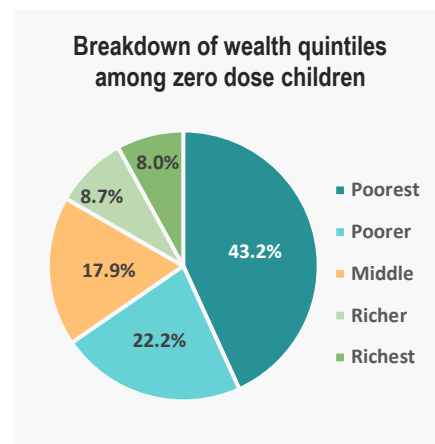
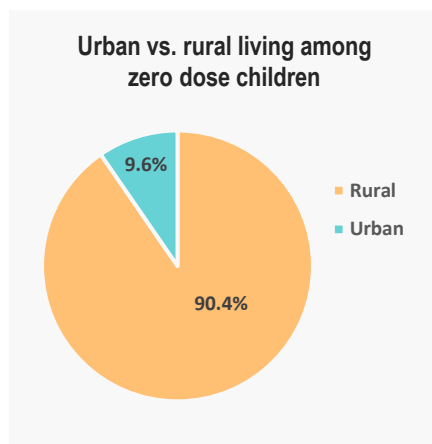
Over the past decade,
1 in 4 children in Madagascar
are zero dose. The proportion
is **increasing**.¹

USING DATA FROM THE 2021 DEMOGRAPHIC AND HEALTH SURVEY CAN HELP TO UNDERSTAND THE CHARACTERISTICS AND DRIVERS OF ZERO DOSE CHILDREN IN MADAGASCAR. Over 40 percent of zero dose children live in the poorest wealth quintile, and more than 1 in 3 have mothers who did not receive any education. Mothers of zero dose children in Madagascar have lower utilization of health services and are more likely to give birth at home than mothers of vaccinated children. Yet, a large proportion of mothers of zero dose children do receive the recommended health services—36 percent had at least four antenatal care visits—which highlights the need to address missed opportunities and better integrate care.⁴

WHO ARE THE ZERO DOSE CHILDREN IN MADAGASCAR?

Most zero dose children in Madagascar live in **rural** areas (90%) and are from the **poorest** homes (43%).⁴

Zero dose children in Madagascar have mothers with limited access to **education** and **health services**.⁴



Demographic and health profile in Sub-Saharan Africa and the full population of Madagascar, for comparison			
	Measure	Madagascar	Sub-Saharan Africa
Mortality	Mortality rate, under-5 (per 1,000 live births), 2020	50.2	73.3
	Mortality rate, infant (per 1,000 live births), 2020	36.3	50.3
	Maternal mortality ratio (modeled estimate, per 100,000 live births), 2017	335	534
Economic	GNI per capita, PPP (current international \$), 2020	1,500	3,795
	Out-of-pocket expenditure (% of current health expenditure), 2019	32.52	29.98
	Current health expenditure (% of GDP), 2019	3.69	4.95
Population	Population, total 2021	28,427,333	-
	Rural population (% of total population), 2021	84.2	-
Maternal health and demographics*	Percentage of mothers who are adolescents (15–19 years), 2021	13.8	-
	Percentage of mothers without primary education, 2021	20.9	-
	Home births (%), 2021	59.6	-
	Pregnant women with 0 ANC visits (%), 2021	10.2	-
	Mothers with 0 tetanus injections (%), 2021	28.7	-

*Among mothers of children 12–23 months

WHY ARE THEY ZERO DOSE? KEY CORRELATES OF ZERO DOSE STATUS:

ACCESS TO MATERNAL HEALTH SERVICES: Children born to mothers who received no antenatal care visits were more than five times more likely to be zero dose than children of mothers with at least four antenatal care visits, when controlling for sociodemographic and maternal health access factors. Children delivered at home were 2.5 times as likely to be zero dose than children born in a facility.

MATERNAL EDUCATION: Children whose mother had no education were 75 percent more likely to be zero dose than those whose mother had primary education.

ADOLESCENT MOTHERS: Children of adolescent mothers (15–19 years) were 51 percent more likely to be zero dose than children of mothers at least 20 years of age.⁴

NATIONAL IMMUNIZATION STRATEGY ANALYSIS: UNDERSTANDING THE STRENGTHS AND WEAKNESSES OF THE IMMUNIZATION SYSTEM TO GUIDE STRATEGIES TO REACH ZERO DOSE CHILDREN

Strengths	Weaknesses
PROGRAM MANAGEMENT AND FUNDING	
<ol style="list-style-type: none"> 1. Law establishing the National Immunization Fund and continuous increase in the state budget allocated to the EPI. 2. Revision of National Strategic Plan, zero dose focused. 3. Existence of donors and partners for immunization (e.g., Gavi, WHO, UNICEF, USAID, MCGL, Dalberg) 	<ol style="list-style-type: none"> 1. Irregular functioning of coordination platforms on EPI at all levels. 2. Insufficient inter-ministerial and inter-sectoral involvement of political, religious, and traditional groups in immunization activities. 3. Inadequate state budget allocation to EPI and low utilization rate of Gavi funds. 4. Conflict of responsibility between national and sub-national authorities. 5. Serious delays in the flow of funds from central to operational levels
SERVICE DELIVERY	
<ol style="list-style-type: none"> 1. Increase in vaccination sites through the involvement of private health facilities and hospitals. 2. Existence of an integrated microplan framework (COVID-19 + routine) for vaccination activities. 	<ol style="list-style-type: none"> 1. The strategy to achieve “zero dose” is not structured, leaving huge numbers of children zero dose/unvaccinated due to socioeconomic, ethnicity, location, and maternal education factors. 2. Inadequate monitoring of targets by health centers and community agents using community registers and tickler files. 3. No effective coordination at all levels to integrate immunization with maternal and child health activities. 4. Most planned outreach sessions not implemented due to lack of resources and accountability.
DEMAND GENERATION	
<ol style="list-style-type: none"> 1. Robust communication plans for campaigns. 2. Good collaboration of the Ministry of Public Health with local radio/TV/social networks, influencers, and mobile operators at all levels. 3. Existence of community health volunteers to leverage immunization activities. 	<ol style="list-style-type: none"> 1. Inadequate operationalization of strategic plan. 2. Insufficient funding for the implementation of routine demand generation activities. 3. Sub-optimal utilization and management of community health volunteers.
HUMAN RESOURCES	
<ol style="list-style-type: none"> 1. Establishment of Regional Training Offices in 74 percent of the regions. 2. Innovative online capacity building approaches for community workers in USAID program areas. 	<ol style="list-style-type: none"> 1. Inadequate quantity of human resources for health and lack of supervision at all EPI levels. Many health centers have only one staff person; thus, capacity for vaccination (especially outreach) is limited. 2. Outdated national human resources for health development policy. 3. Low motivation for community agents, because they are not absorbed into the system.
VACCINES AND LOGISTICS	
<ol style="list-style-type: none"> 1. Solar refrigeration at the health center level has increased from 43 to 62 percent in three years. 2. Trained staff in immunization supply chain and logistics at national level. 3. Digitalization of vaccines and consumables management at the central level. 	<ol style="list-style-type: none"> 1. Frequent stock-outs of vaccine and devices. 2. Standard operating procedures unavailable for logistics management of the EPI. 3. Regional/district infrastructure unsuitable for installation of new cold rooms. Insufficient budget and tools for maintenance of cold chain equipment. 4. Eighty percent of health centers without means of transport for vaccine collection; many districts without adequate transport for vaccine supply and supervision.
MONITORING AND DISEASE SURVEILLANCE	
<ol style="list-style-type: none"> 1. Existence of a functional surveillance system. 2. Recent integration of EPI data into DHIS2 in 2021. 3. Availability of 2019–2022 data improvement plan. 	<ol style="list-style-type: none"> 1. Under/overestimation of target population in some districts. 2. Inadequate immunization data management tools. 3. Inadequate capacity to analyze data for action. 4. Highly inaccurate data, leading to discrepancy between administrative coverage and DHS or WUENIC estimation.

HOW CAN WE ADDRESS ZERO DOSE STATUS?

INNOVATIVE STRATEGIES FOR ZERO DOSE USING THE IDENTIFY, REACH, MONITOR, MEASURE, AND ADVOCATE (IRMMA) FRAMEWORK:

IDENTIFY:

- Locate and prioritize zero dose communities through data triangulation and precise analytics (e.g., using prioritization tool or GIS-based micro-planning).

REACH:

- Co-create context-specific delivery approaches using human-centered design thinking.
- Equip health providers and volunteers with last-mile delivery tools and resources.
- Deliver vaccinations alongside an integrated package of responsive family-oriented services.

MONITOR AND MEASURE:

- Revive or erect community accountability systems to ensure no community is left behind.
- Strengthen data analysis capacity.

ADVOCATE:

- Mobilize political will for zero dose agenda using influential champions.
- Expand partnerships with private sector and civil society organizations to mobilize resources and support.
- Increase funding to pro-equity immunization strategies.

HOW CAN WE LOOK BEYOND IMMUNIZATION TO IMPROVE CHILD HEALTH?

Many of the barriers that zero dose families face in accessing immunizations also hinder their ability to reach care when their child is ill. Approximately 60 percent of people in Madagascar live more than five kilometers from a health facility.⁵ There are also many close links between nutrition and vaccination, and vaccination can support healthy growth and development. Children with poor nutritional status and vaccine status are often clustered, and malnourished children are at a greater risk of severe outcomes from vaccine-preventable illness. Opportunities to integrate immunization, child health, and maternal health services could greatly close equity gaps in access to health care and improve health outcomes in underserved communities.

References

1. World Health Organization and UNICEF. *WHO-UNICEF Estimates of National Immunization Coverage, 1990–2022: Immunization Madagascar 2023 country profile*. <https://www.who.int/publications/m/item/immunization-madagascar-2023-country-profile>.
2. United Nations Department of Economic and Social Affairs, Population Division. *World Population Prospects 2021*. 2021.
3. World Bank Group. *World Development Indicators*. 2022. <https://datatopics.worldbank.org/world-development-indicators/>.
4. Institut National de la Statistique and ICF. *Enquête démographique et de santé à Madagascar 2021*. 2022. <https://www.dhsprogram.com/pubs/pdf/FR376/FR376.pdf>.
5. USAID. *Madagascar Global Health*. 2023. <https://www.usaid.gov/madagascar/global-health>.



This brief is made possible by the generous support of the American people through the U.S. Agency for International Development (USAID) under the terms of the Cooperative Agreement #7200AA20CA00002, led by Jhpiego and partners. The contents are the responsibility of MOMENTUM Country and Global Leadership and do not necessarily reflect the views of USAID or the United States Government.

MOMENTUM

USAIDMomentum.org

TWITTER: @USAIDMomentum

FACEBOOK: USAID Momentum