

Delivering Immunization Services Where They Are Needed: RED/REC in Mozambique

BACKGROUND

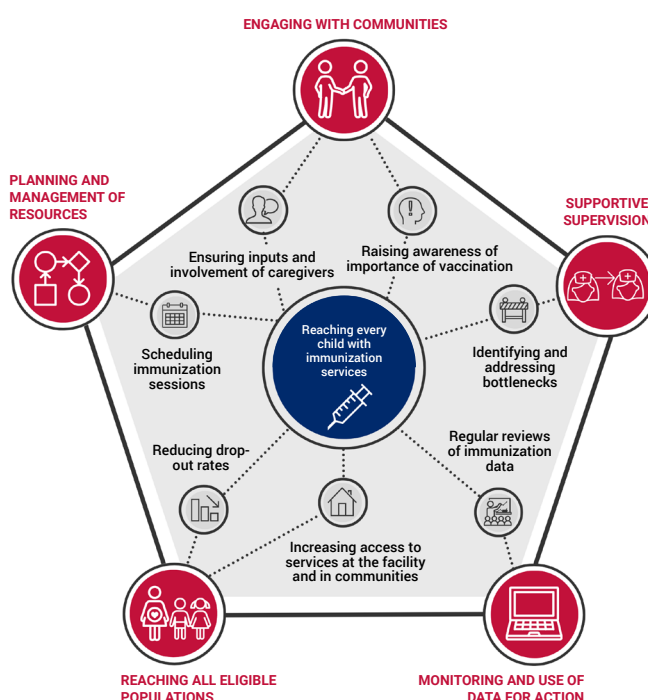
Immunization coverage is estimated to be reasonably high in Mozambique, with WHO/UNICEF national estimates for DPT3 at 88% in 2019. While impressive, DPT3 coverage does not tell the complete story. According to the 2015 Survey of Indicators on Immunization, Malaria and HIV/AIDS in Mozambique (IMASIDA), only 66% of children aged 12 to 23 months were fully vaccinated, and only about half of those children had received all of the required vaccines by 12 months of age. This indicates a problem with timely and correct vaccination, which contributes to occasional outbreaks of vaccine-preventable diseases. The overall coverage rate also masks inequities between districts and communities.

To address some of the shortcomings of immunization services, the Ministry of Health (MOH) and Expanded Program on Immunization (EPI) have prioritized introducing and scaling the Reach Every District/Reach Every Community (RED/REC) strategy to high priority districts. RED/REC has five components (Figure 1) for implementation that build national capacity from facility and district level upward to ensure all children are fully immunized. The strategy addresses common obstacles in delivering immunization services, such as poor quality district planning, low quality and unreliable services, and inadequate monitoring and supervision of health workers.

JSI has been supporting EPI and the Provincial Departments of Health (DPS, in Portuguese) to implement RED/REC in three provinces: Sofala and Nampula for four years, and Manica for two years.¹ JSI ensures competency transfer to provincial and district colleagues to ensure they have stronger voices and the ability to guide and manage immunization activities. The main RED/REC interventions support health facility staff to identify and map underserved communities, develop and regularly update microplans for health areas and districts, improve resource utilization, implement integrated outreach services (e.g.,

immunization, nutrition, and family planning) in underserved communities and, ultimately, raise immunization coverage. In other provinces, outreach for immunization services is ongoing, but RED/REC is not being fully implemented.

At the national level, JSI's unique technical expertise plays an instrumental role in shaping policy and guidance, using provincial and district experiences through implementing RED/REC for lessons learned to improve and refine the strategy and immunization services. JSI's insight focuses on strengthening routine immunization (RI) to achieve durable immunization impact at scale by identifying and reaching the underserved through innovative strategies for increased equity, such as RED/REC, and pioneering new approaches to partner with communities. JSI specialists bring technical credibility, programming expertise, and deep field experience to provide country-specific solutions and RI system strengthening.



¹ USAID/MCSP supported Sofala and Nampula for the initial two years (2017-2018) then with Gavi support for two; Gavi has been supporting Manica for two years (2019-2020). https://www.mcsp-program.org/wp-content/uploads/dlm_uploads/2018/12/MCSP-MZ-Immunization-Brief.pdf

Graphic (on right) source: https://publications.jsi.com/JSIInternet/Inc/Common/download_pub.cfm?id=22909&lid=3

As with all health services, the immunization program also had to adapt during 2020 due to the COVID-19 pandemic. With the initial surge of cases in Mozambique, outreach activities were suspended for about two months, and health facilities saw a reduced number of patients as people shifted to staying home. JSI's support also shifted, innovating for more remote supervision and mentoring through mobile phones, using WhatsApp groups to reinforce peer-to-peer learning, and targeting support to districts and facilities that were falling short of performance expectations.

This brief describes the continuing implementation of the RED/REC strategy and the game changers that contributed to its success in increasing outreach services and strengthening RI. Noting the challenges that still exist, this brief also highlights recommendations as the EPI scales up the RED/REC strategy.

NOTABLE IMPROVEMENTS

Although the two past years in Mozambique have been marked by natural disasters (e.g., cyclones), political instability, and COVID-19, JSI continues to see improvements in the number of outreach sessions conducted and the number of children reached through outreach efforts and in facilities. Stronger government leadership and ownership of RED/REC is also driving process and management improvements in the immunization program, including improved utilization of Gavi Health Systems Strengthening (HSS) funds, which largely supports

Notable Successes



Improvements in the number of outreach sessions conducted



Increased number of children reached with immunization services, both through outreach services and facility based



Improved data use for decision making



Stronger government leadership and ownership of RED/REC

Table 1: RED/REC Implementation in Nampula, Sofala and Manica

	End 2018	End 2019	End 2020
Number and percent of districts implementing RED/REC in three target provinces	11 (23%)	23 (50%)	29 (63%)
Number and percent of health facilities in target districts implementing RED/REC	77 (15%)	201 (40%)	386 (77%)
Number and percent of children vaccinated through mobile brigades (tracking MR1 & 2)	27,724 (15%)	48,416 (18%)	108,993 (12%)

Figure 1: Districts implementing RED/REC, 2018-2020

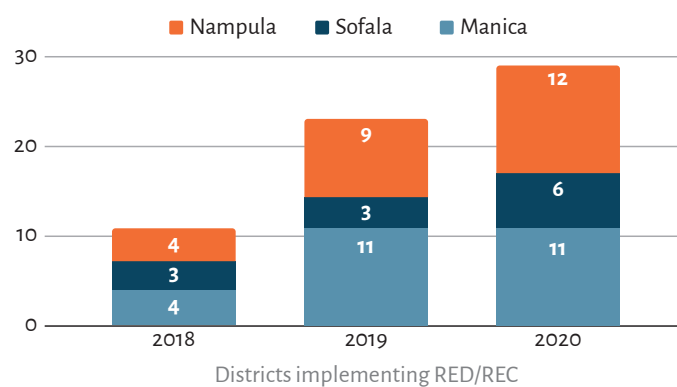


Figure 2: Facilities implementing RED/REC, 2018-2020

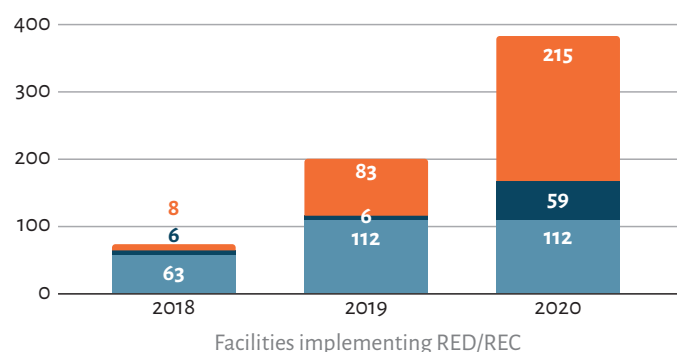
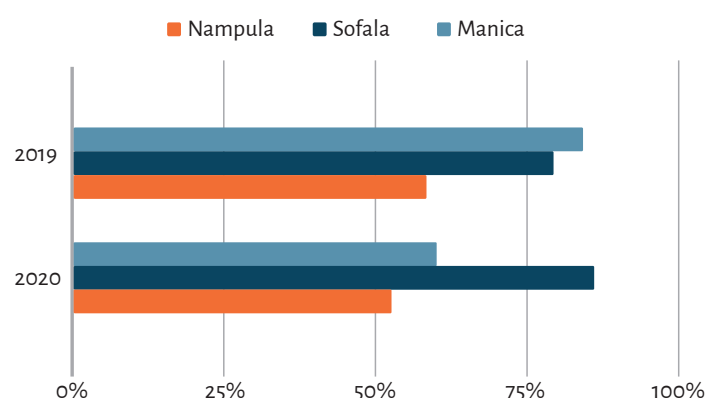


Figure 3: Percent of planned outreach services implemented, 2019-2020

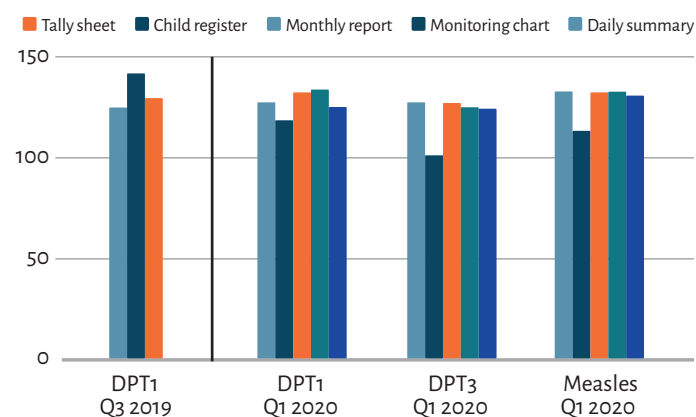


implementation of the RED/REC activities of micro-planning, outreach, and review meetings. JSI's technical assistance ensures that health system staff are knowledgeable of the five components of RED/REC and are implementing the strategy to the highest quality possible.

Process improvements

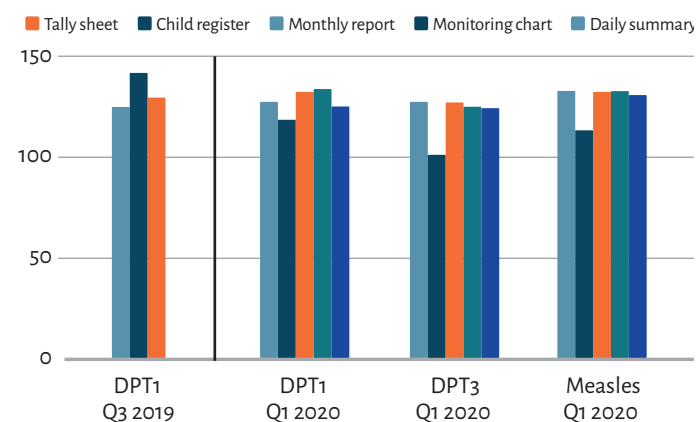
Over the course of the past three years, the number of districts and facilities implementing RED/REC significantly increased (Figures 1 and 2), with 63% of the districts in these three provinces having adopted the strategy. Nampula has shown an impressive uptake of the strategy, moving from 17% of the districts to 52% of the districts with more than 90% of facilities in those districts implementing RED/REC at the end of this time period. Manica is unique as all 11 districts and all 112 facilities are implementing RED/REC. In large part, this is due to the DPS leadership and their active participation, particularly during the introduction phase of RED/REC, demonstrating early on that the strategy is important to reach all children. It is also notable that the implementation of RED/REC activities is largely supported through government-managed HSS funds, the management of which has improved over the past years, as demonstrated by the improved spending rate of funds.

Figure 4: DQSA results before and after introducing daily summary forms, Health Facility A



Another key performance indicator (KPI) to assess progress is tracking the number of outreach services (mobile brigades) planned versus those implemented (Figure 3). This indicator reflects the capacity to plan and the capacity of the overall system to support outreach services: transport, per diems, health care workers (HCW), vaccine carriers, ice/gel packs, and, of course, the vaccines. The year 2020 presented a particular challenge for outreach, due to the COVID-19 pandemic, which mandated about two months without outreach services at the initial surge of infections. As outreach planning is done on a quarterly basis, the plan did not reflect the reality of the pandemic, which can be seen with a slight decline in this KPI. Sofala is the exception as the DPS placed attention on outreach efforts after travel began again in order to “catch up” with those children who missed vaccine doses during lock down. HSS funds also became available at the same time, facilitating these efforts.

Figure 5: DQSA results before and after introducing daily summary forms, Health Facility B

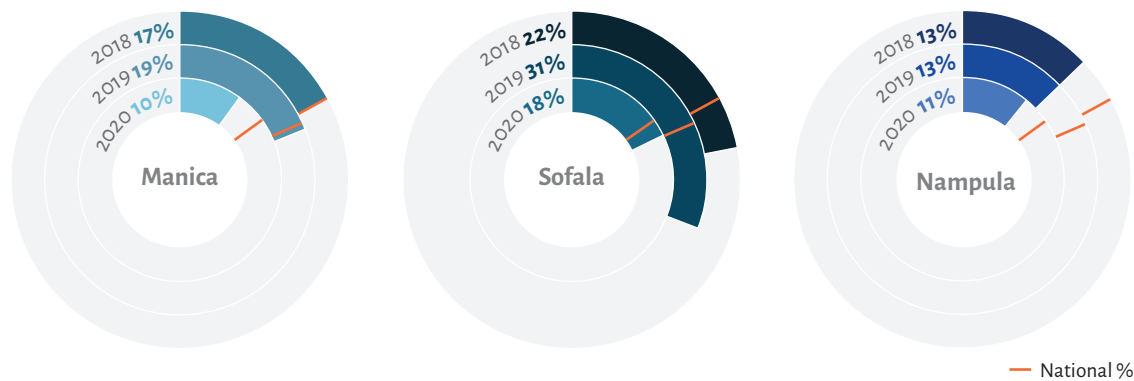


Data quality and use

During the course of these projects, JSI has supported facilities to implement Data Quality Self Assessments (DQSA) in order to check the consistency and accuracy of data across the multiple data collection tools used for immunization services. Notable improvements in the quality of data can be seen in Sofala, where JSI introduced a daily summary sheet for immunization services. Figures 4 and 5 show the DQSA results in two facilities, before and after the introduction of the daily summary sheet. While accuracy is still not 100%, the results show improvements between the two instances of the self-assessment.

The JSI team has worked closely with the DPS in each province to better plan supervision based on administrative reports, KPIs, and results of the DQSAs. With this more in-depth analysis, JSI has been able to target support, supervision, and mentoring to districts and facilities that are performing less than optimally.

Figure 6: Percent of measles vaccine administered during outreach session



With reduced travel due to the pandemic, our team has shifted from in-person supervision to providing remote support. This more targeted approach to planning supervision has been better planned and more effective than the approach applied before the pandemic. JSI continues to work with the DPS to build capacity in this area of data use for improved performance.

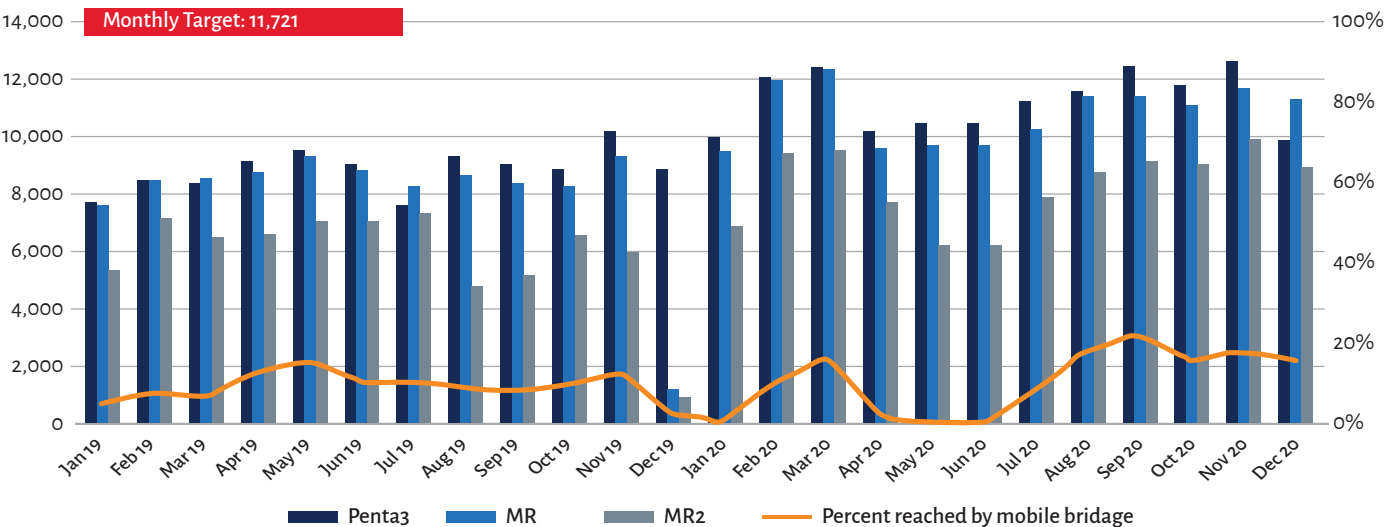
Children immunized

Over the past three years, the number of children immunized in both fixed and outreach services increased. Almost 200,000 children received their measles vaccinations, either first or second dose, through mobile brigades in these three provinces, increasing each of the past three years due to expanded implementation of the RED/REC strategy and more thorough planning to reach

the most vulnerable and those at highest risk of not accessing fixed health services. This represents 14% of all measles vaccines administered, through both fixed and outreach services, demonstrating improved equity and reductions in ‘zero dose measles’. A key component of RED/REC is strategically targeting less serviced areas and communities through micro-planning, community engagement, and applying an understanding of the context and highest need for outreach efforts.

It’s interesting to note that the national average of measles first and second doses administered through mobile brigades is similar to what is reported in the three provinces that JSI supports, although Sofala consistently reaches a higher percentage through outreach than other provinces (Figure 6).

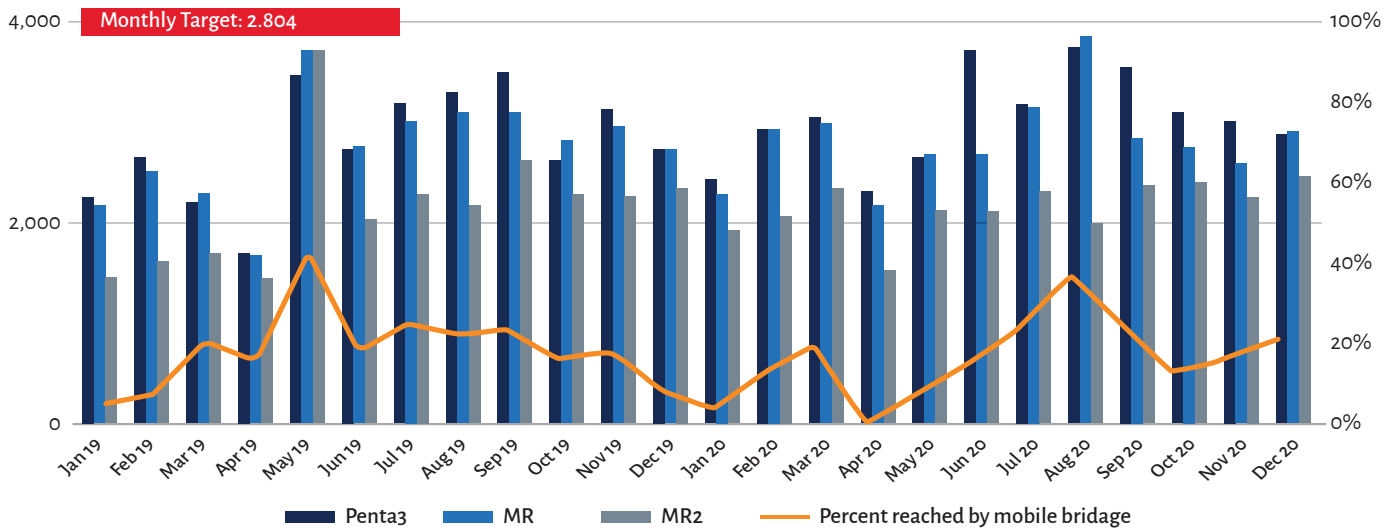
Figure 7: Trend over time, number of children vaccinated in Nampula



Timeline Context

- Dec 2019 – heavy rains
- March 2020 – COVID-19 begins impacting health services
- June 2020 – outreach started again
- Aug 2020 – HSS funds become available for outreach and supervision

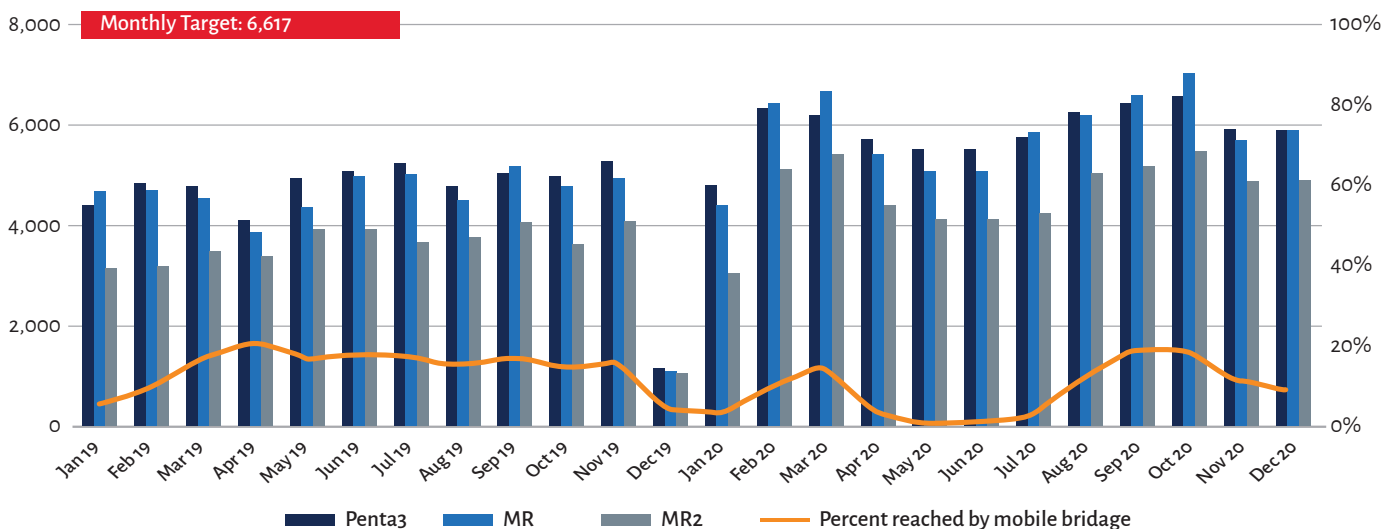
Figure 8: Trend over time, number of children vaccinated in Sofala



Timeline Context

April 2019 – IDAI cyclone, May 2019 responded with increased outreach
March 2020 – COVID-19 begins impacting health services.
July 2020 – outreach normalizes
August 2020 – HSS funds become available for outreach
September 2020 – some stockouts due to the transition to outsourced distribution

Figure 9: Trend over time, number of children vaccinated in Manica



Timeline Context

Dec 2019 – heavy rains
March 2020 – COVID-19 begins impacting outreach.
May 2020 – outreach is at a minimum due to COVID-19
July 2020 – outreach begins again as COVID subsides

Game Changers



Demonstrated Leadership: Participation of District Medical Officers in the initial training and planning process facilitated knowledge of and approval processes of micro-plans.



Use of appropriate and accessible technology: Increased use of mobile phones facilitated WhatsApp groups for a wide range of technical decision makers at district and provincial levels, ensuring rapid sharing of information; remote coaching and mentorship via phone calls (when travel was not possible).



Broad community engagement: Engaging all social actors (local economic agents, NGOs, local government and community leaders) through targeted and strategic outreach to promote and support mobile brigades and mobilize community members for immunization services.



Sector-wide collaboration: Creating a RED/REC Technical Working Group in the districts led by Focal Points, bringing together other sectors, particularly nutrition, to maximize the use of resources for mobile brigades and build sustainability and local ownership.



Meeting operational needs: Providing the data collection and planning tools (paper or digital); ensuring government-managed HSS funds and transportation for mobile brigades; introducing daily tally sheets which contribute to improved data quality.



Targeted supervision: Concentrating mentorship and supervision, both remote and in-person, to districts and facilities that are falling short of expectations; streamlining efforts and resources; shifting to remote support, supervision, and mentoring in response to COVID travel restrictions.



Outreach planning: Using behavioral and quantitative data based on the context of the community to determine which communities are underserved with the highest number of zero dose children for outreach services; better use of resources for optimal outreach efforts.

These three provinces report relatively high rates of fully immunized children as a percent of the total target population, at 96%, 92%, and 90% for 2018-2020 respectively. This high rate of fully immunized children hides the challenge of the drop-out rate for the second dose of the measles containing vaccine. While the drop-out rate across these three provinces declined from 31% in 2018 to 22% in 2020, it remains a challenge that was exacerbated by the global pandemic.

Despite the challenges, the number of children immunized is steadily increasing each year in each of these provinces. (Figures 7,8 and 9).

WAY FORWARD

EPI continues to see the value of the RED/REC strategy and has prioritized 59 districts for RED/REC in 2021, 25% of which are new districts in new provinces to introduce the strategy. These districts

were selected based on lower immunization performance on key indicators (including the lack of health facilities providing RI services per 10,000 habitants), recognizing that the micro-planning and outreach aspects of RED/REC can extend the reach of health services to ensure underserved communities are included in care and service provision.

Based on these years of learning from RED/REC implementation in Mozambique, a few recommendations may strengthen the expansion and scaling up of this strategy:

Institutionalize RED/REC capacity building in an effort to combat high turnover of HCW. This can be a two-pronged approach. Firstly, adapt the curricula of health training institutes to incorporate RED/REC strategy and policies into pre-service and in-service training for all new EPI professionals. The second approach places greater emphasis on peer-to-peer training, particularly at the health facility level and more formal than mentorship, to ensure full knowledge

transfer and adoption of best practices related to RED/REC, as well as all health services. This can be combined with planning and performing on-the-job training for new staff and should be complemented by resources such as airtime to facilitate remote support through WhatsApp and other telecommunications means..

System strengthening and commitment to ensure that all components of RED/REC are available to HCW and decision makers, as needed. Staff are very capable of developing micro-plans, budgets, and identifying underserved communities for targeted outreach services. However, gaps in the system -- in terms of funding availability, transport, data collection tools, and meeting support costs -- are inhibiting the full implementation and sustained resourcing of RED/REC.

Optimize human resource allocation to match the demand for immunization services and outreach with the availability of staff to provide those services. Strategically place and sufficiently staff HCW to facilities that have high volume or reach a large proportion of their target population through outreach and mobile brigades.

Innovative strategies for MCV-2 need to be resourced and sustained to reduce drop-out and ensure protection from this vaccine-preventable disease. For example, improve communication skills of health professionals to address missed opportunities for vaccination at the facility level among children attending non-vaccine consultations, and apply new methods for accurately identifying and prioritizing target groups, especially for interventions of second year of life to capture MCV-2.

Engage broader local constituents more actively and consistently to reach zero dose and under-immunized children. Reaching this unique population requires partnering long-term with different community stakeholders and leaders, and will require closer coordination with other health areas, such as antenatal care and maternity wards (as well as adolescent health services), to track children from birth through the life-course of vaccines.

Evaluation of RED/REC activities would help to showcase and increase the benefits of the approach for immunization and the broader health system. Insight into the impact and outcome of these efforts to expand and scale this approach would allow EPI to refine activities to see greater impact on coverage and equity. Evaluation of the micro-planning is of particular interest to assess how well it is being implemented to reach zero dose and under-immunized children and ensure their full coverage.