Applying Equitable Approaches to Immunization

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Implementation in Ethiopia and Uganda Shows How the RED-QI Approach Improves Equitable Access to Vaccines

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BACKGROUND

Equitable Immunization Coverage Prioritized by Global Strategies

The goal to reach every last child with lifesaving vaccinations has been at the heart of immunization programs for decades. However, persisting inequities in vaccine uptake contribute to the continued occurrence and outbreaks of vaccine-preventable diseases.[1] Populations affected by conflict, living in remote areas, or experiencing discrimination based on ethnicity and gender are among the most vulnerable.[2]

The need to focus on equitable immunization service delivery is a critical component of recently launched strategies by Gavi (the Vaccine Alliance) and the World Health Organization (WHO) and partners, which have prioritized equity of immunization services in their current strategic plans. In **Gavi 5.0 (2021-2025),** there is "a core focus on unreached and under-immunized children with equity as the organizing principle."[3] **WHO's Immunization Agenda (IA) 2030** has prioritized reaching "high equitable immunization coverage at the national level and in all districts."[4]

An immunization strategy developed by WHO, UNICEF, and other Gavi Alliance partners in 2002—called **Reaching Every District (RED)**—is used by most African countries to strengthen management of routine immunization (RI) services at the district level and below to improve equity. But some districts and facilities in different countries have had challenges in fully operationalizing RED.

To address these challenges, John Snow, Inc. (JSI), applied quality improvement (QI) concepts and tools to develop an innovative approach in 2010 to help immunization programs fully put RED into practice in a way that is sustainable and adapted to their local context through continuous learning. This approach is known as **Reaching Every District using Quality Improvement (RED-QI)**. It is important to note that RED-QI does not try to replace the RED strategy. Instead, it helps advance RED from a "what to do" strategy to a "how to" approach for strengthening the RI system.

JSI worked with the government of **Ethiopia from 2011-2021** and the government of **Uganda from 2013-2019** to introduce this enhanced approach, scaling up the projects to ultimately reach 103 districts in Ethiopia and 25 districts in Uganda.

HOW RED-QI IMPROVED EQUITY IN IMMUNIZATION IN ETHIOPIA AND UGANDA

By building subnational capacity to manage immunization and fully implement RED, particularly through bottom-up microplanning and community engagement, the RED-QI approach has put into practice key elements of current global strategies to reach underserved populations and improve equity in RI services.

One way to improve equitable access to RI is to conduct **bottom-up microplanning**, in which health facilities develop their own immunization microplans, which are then used to develop the district-level microplan.

An effective process for microplanning includes health workers and managers working with local community and administrative leaders to analyze local immunization data; conduct a headcount of the target population; conduct community mapping to identify catchment populations and learn their true access to service delivery points; determine the appropriate service delivery strategy (fixed, outreach, mobile), particularly for geographically or socioeconomically hard-to-reach areas; and develop a budget to fully implement the plan.[5]

Once the microplan is developed, several enabling factors support its effective implementation. For example, community engagement, a key RED-QI component, provides support to monitor the program, assists with problem solving, generates demand for services, traces defaulters, and helps mobilize additional resources to expand immunization service opportunities, resulting in service delivery tailored to the local context. The use of these RED-QI processes for microplanning and community engagement in Ethiopia and Uganda contributed to improved equity in RI.

In 2020, JSI conducted a desk review of key project documents, data, and studies from RED-QI in Ethiopia and Uganda. In addition, JSI conducted 28 key informant interviews (KIIs) with project officers, EPI managers, health facility managers, and immunization partners familiar with the approach's implementation and expansion in these countries. These interviews drew out the lessons learned and helped inform how the approach could be tailored to strengthen RI in other countries. The findings showed how RED-QI helped the countries improve equity in RI services.

Quantitative Findings: Both Countries Substantially Improve Microplanning and Immunization Reach


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Quantitative findings from both countries indicate that the approach was effective in reaching its objectives of **better planning of immunization sessions** and **increased equity of service provision** through a greater ability to identify and provide services to underserved communities.

For example, a serological study of three pilot districts in **Ethiopia** demonstrated **improved reach of all eligible targets** with quality immunization services. Immunological protection against tetanus increased by an average of 12 percentage points from 2013 (pre-intervention) to 2016 (post-intervention).[6]

Additionally, program assessments demonstrated **improvements in microplanning** for immunization services in Ethiopia. For instance, districts and facilities with completed microplans increased dramatically during the intervention period, as did the number of districts and facilities with catchment area maps (see Table 1 and Table 2 below).

Table 1: Districts and facilities with complete microplans (out of facilities visited at least three times) in UI-FHS (Universal Immunization through Improving Family Health Services) supported areas, 2014-2018

Administrative level	Baseline	Endline
District (N=84)	14%	89%
Health Center (N=97)	8%	93%
Health Post (N=99)	1%	84%

Source: UI-FHS project monitoring data

Table 2: Districts and facilities with a catchment area map in UI-FHS supported areas, 2014-2018

Administrative level	Baseline	Endline
District (N=18)	39%	72%
Health Center (N=37)	46%	76%
Health Post (N=73)	49%	77%

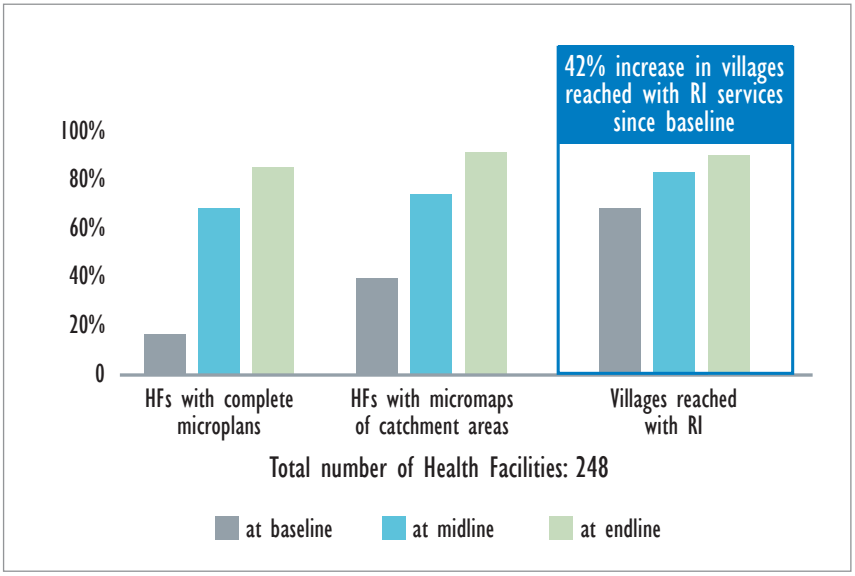
Source: UI-FHS project monitoring data

Also in Ethiopia, the percentage of health centers with a **defaulter tracking mechanism** grew from 70% to 89%; the percentage of health posts with a defaulter tracking mechanism rose from 63% to 89% during the intervention period. (Source: Project monitoring data)

In addition, with technical assistance in microplanning, the number of health centers providing immunization services in districts supported by the program in Ethiopia's SNNPR region nearly quadrupled, rising from 28 to 106 during the intervention period.

The program in **Uganda** achieved similar gains**.** For example, there was a five-fold increase in the number of **health facilities with microplans** and a 42% increase in the number of **communities reached** with RI services, representing 1,241 additional villages across 10 intervention districts.[7]

Figure 4: Improved microplanning and micromapping resulted in increased equitable reach of RI services



Better estimates of target populations and the identification of hard-to-reach areas also contributed to more efficient planning. A program assessment of six districts in two regions of Uganda found that where RED-QI microplanning was conducted, there were large increases in the **number of RI sessions both scheduled and actually conducted**. In two districts, for example, there was a 139% increase in the number of RI sessions planned, from 1,793 in April 2016 to 4,284 by April 2018. The number of sessions actually conducted more than doubled, from 1,346 to 2,758.[8]

An increase in the number of conducted sessions occurred across 10 additional intervention districts in Uganda. In these 10 districts, 2.3 times as many sessions were conducted by the end of RED-QI introduction compared with the beginning.[7]

Qualitative Findings: Microplans and Mapping are Perceived as Enablers of Strong RI Services

In both Ethiopia and Uganda, health personnel across all levels of the health system said that they appreciated **participatory mapping** of catchment populations and use of this information to **determine where to provide static, outreach, and mobile (in Ethiopia) sites** for service delivery. District officials and health workers saw the **maps and microplans** as strong enablers of effective implementation of RI services, especially for outreach and mobile activities.

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In Ethiopia, the project engaged community clan leaders in the mapping process so they could identify their small communities, their nomadic travel routes, and the best times and locations to reach these communities.

Ethiopia key informant interview (KII) respondents described the value of RED-QI in **improving WHO Expanded Programme on Immunization (EPI) planning**. For example, they cited community involvement in planning as a key contributor in increasing the accuracy of target populations for facility **catchment areas**. "The eligible population is now [developed] through headcount rather than estimates," noted a regional EPI manager. "Conducting inventory (headcount) house to house…has shown that there are many more children than they thought." This, in turn, led to increasing the number of outreach sessions in many areas and providing services to more people.

Nearly all Uganda KII respondents also noted the value of RED-QI in strengthening both the **quality and use of EPI microplans**. "Microplanning was a game changer," said a district EPI manager, noting that having facilities create their own microplans "helped staff develop a results-oriented mindset. They then had a baseline for monitoring [and] a basis for analysis of performance gaps, and they developed a drive for better results. Knowledge of their catchment areas also improved the attitudes of health workers."

Other respondents in Uganda cited **microplanning as a means of empowering health workers**, helping them to solve local problems based on their knowledge and use of available resources rather than relying on solutions from managers at higher levels of the system. "They feel great whenever they address a local hindrance that has been longstanding for no good reason," noted one health facility manager.

CONCLUSION

RED-QI Contributing to Global Priority of Equity of Immunization Services

The findings from the desk review of project documents, data, and studies of RED-QI in Ethiopia and Uganda and interviews with those who implemented the approach drew out critical lessons learned. One of these key lessons was the effectiveness of using bottom-up microplanning and engaging community members in both RED-QI planning and implementation. Using processes of engaging community members to help map catchment populations and plan immunization services, mobilize local resources to expand services, monitor performance, use data for decision making and problem solving, and tailor services to the local context also helped achieve greater reach of immunization.

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