Elizabeth Glaser Pediatric AIDS Foundation

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Haba Na Haba
Technical Bulletin

TOWARD ELIMINATION OF NEW HIV INFECTIONS IN CHILDREN: Progress, Challenges, and Opportunities

Photo credit: James Pursey

The last one and a half decades have seen rates of mother-to-child transmission of HIV (MTCT) in developed countries drop below 2%.[1] Even in countries where health resources and access to health services are more limited, MTCT rates below 10% have been documented in recent years, largely due to the scale-up of antiretroviral (ARV) prophylaxis administered during pregnancy and in conjunction with childbirth.[2–5]

Recently, the compelling results from the Breastfeeding, Antiretrovirals and Nutrition (BAN), Mitra, Kesho Bora, and other clinical trials in Africa demonstrated the effectiveness of ARV drugs in reducing HIV transmission via breastfeeding, finally providing an effective approach to safer infant feeding for women living with HIV in developing countries.[6–8] With this new evidence and the dramatic

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Welcome!

Welcome to the Elizabeth Glaser Pediatric AIDS Foundation's technical bulletin, *Haba Na Haba!*

This publication provides a dynamic forum for the routine sharing of technical information and promising practices with our fellow colleagues and extended family of partners and like-minded organizations around the world. Each issue of ***Haba Na Haba*** highlights a topic of particular importance to the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF). The highlighted topic for this issue is the **Elimination of New HIV Infections in Children**.

What Does *Haba Na Haba* Mean?

The name of the bulletin, *Haba Na Haba* ("little by little"), is borrowed from the Swahili proverb ***haba na haba, hujaza kibaba*** ("little by little fills the pot") and was chosen to reflect the often incremental nature of progress in our field. As the experiences described on the following pages demonstrate, the smaller efforts of every one of us are the essential "ingredients" for mounting a strong and united global response to HIV and AIDS.

Feedback is welcomed from all readers, and contributions are accepted from all EGPAF staff. Please send your questions, comments, or content submissions to techbulletin@pedaids.org.

TOWARD ELIMINATION OF NEW HIV INFECTIONS IN CHILDREN: Progress, Challenges, and Opportunities *(continued)*

progress in expanding programs for prevention of MTCT (PMTCT), the goal of virtual elimination of pediatric HIV is now within reach.

A Global Task Team, chaired by the Joint United Nations Program on HIV/AIDS (UNAIDS) executive director and the U.S. Global AIDS coordinator, released *The Global Plan Towards the Elimination of New HIV Infections Among Children by 2015 and Keeping Their Mothers Alive* (the Global Plan) in 2011, which defines two major targets: reduce the number of new HIV infections among children by 90% and reduce the number of AIDS-related maternal deaths by 50%. While the plan targets 22 countries* accounting for nearly 90% of new pediatric HIV infections, its goals have been adopted broadly and there has been rapid movement by countries to develop national plans to achieve virtual elimination of mother-to-child transmission (EMTCT). These plans are largely focused on the scale-up and strengthening of interventions that fall within the four prongs of PMTCT (see Box 1), which were reintroduced in the Global Plan as a primary mechanism for eliminating new HIV infections in children.

The central mission of the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) is elimination of pediatric HIV. EGPAF is active at the global, regional, and national levels, contributing to both the vision for EMTCT and the implementation of related services down to facility and community levels. To reach the targets of the Global Plan, experiences must be analyzed and shared to assess progress, challenges, and opportunities faced by countries in bringing an end to pediatric HIV. As one of the largest international organizations supporting the implementation of PMTCT and HIV care and treatment services globally, EGPAF has produced this issue of *Haba Na*

Box 1. The Four Prongs of PMTCT

The four-pronged approach to PMTCT developed by United Nations agencies in 2002 remains the cornerstone of EMTCT program design. In the Global Plan, the original four prongs are further articulated as follows:[9]

Prong 1: Prevention of HIV among women of reproductive age within services related to reproductive health, such as antenatal, postpartum, and postnatal care, and at other health service delivery points, including community structures

Prong 2: Provision of appropriate counseling and contraceptives to women living with HIV to meet unmet needs for family planning and spacing of births as well as to optimize health outcomes for these women and their children

Prong 3: Ensuring that pregnant women living with HIV receive HIV testing and counseling as well as access to antiretroviral drugs to prevent HIV infection from being passed on to their babies during pregnancy, delivery, and breastfeeding

Prong 4: Provision of HIV care, treatment, and support for women and children living with HIV and their families

*The 22 priority countries include Angola, Botswana, Burundi, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Ghana, India, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Uganda, Tanzania, Zambia, and Zimbabwe.

Haba to expand and deepen the global discussion on elimination of new HIV infections in children and keeping their mothers alive.

What Will It Take to Eliminate New Pediatric HIV Infections?

A 2010 analysis conducted by UNAIDS and others identified the following factors as instrumental to pediatric HIV elimination:[10]

- high coverage of PMTCT services,
- more effective ARV interventions,
- safer infant feeding practices (exclusive breastfeeding for the first six months of life with ARV prophylaxis coverage from birth until breastfeeding cessation or exclusive replacement feeding),
- meeting unmet need for family planning, and
- reducing new HIV infections among women of reproductive age.

The analysis makes clear that all of these components are necessary to reach the goal of elimination of pediatric HIV. Yet, each of these critically important factors identified for EMTCT has its own set of obstacles.

Coverage

High coverage of PMTCT services is critical to reaching the goal of EMTCT. The UNAIDS analysis showed that reaching 90% of pregnant women through widespread country adoption of the revised 2010 WHO PMTCT guidelines would decrease the number of HIV-infected infants by 62%.[10] Ensuring that antenatal care (ANC) services always include provision of HIV testing and interventions for HIV-positive women is the first step in expanding access to PMTCT services.

In addition to coverage of services, it is critical to improve retention of women and infants in PMTCT interventions throughout pregnancy and breastfeeding to ensure their effectiveness. Country-level analyses have consistently shown large losses across the PMTCT cascade (see Figure 1); however, the lack of longitudinal monitoring in many programs makes it difficult to properly assess and manage client retention.[11]

Effective ARV interventions

In comparison with prior guidelines, the ARV regimens for PMTCT recommended in the 2010 WHO guidelines are more efficacious, are initiated earlier in pregnancy, and are continued throughout the breastfeeding period. While many African countries have made great strides in delivery of PMTCT services, as of 2011, only five countries had reached the 2001 United Nations General Assembly Special Session (UNGASS) goal of providing more effective ARV regimens (i.e., discontinuing use of single-dose nevirapine) for PMTCT to 80% of pregnant women living with HIV: Botswana, Lesotho, Namibia, South Africa, and Swaziland.[12]

High viral load has been shown to be the predominant risk factor for MTCT, making identifying treatment-eligible pregnant women and providing them with antiretroviral treatment (ART) a top priority. Among pregnant women in the 22 Global Plan priority countries who were in need of ART in 2010, only 35% received it. Only three countries initiated

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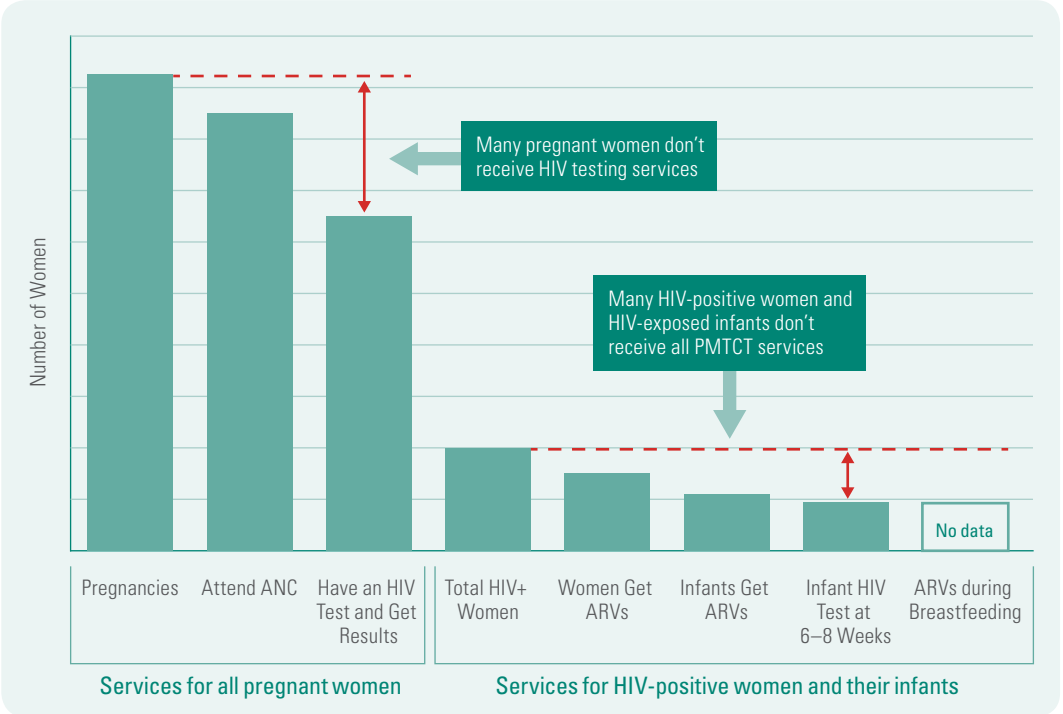

Figure 1. Typical PMTCT cascade

Note: The difference between the green bars and the red dashes represents the magnitude of missed opportunities and unmet need for services.

ART in more than 50% of eligible pregnant women (Botswana, 67%; South Africa, 95%; and Swaziland, 53%).[12] The timing of ART initiation for pregnant women is also important, with MTCT rates more than five times higher among women with less than four weeks of ART before labor compared to those receiving at least 12 weeks of ART during pregnancy.[13] Some barriers to ART uptake are being overcome through use of point-of-care diagnostics to increase access to CD4 testing, better sample transport, strengthened clinical mentoring, and quality improvement (QI) programs that focus on improving uptake of ART among pregnant women. *See page 21 to learn about EGPAF-Tanzania's work on improving access to ART for pregnant women through service integration.*

Safer infant feeding

The 2010 WHO PMTCT guidelines provide guidance for safer infant feeding in resource-limited settings with the recommendation of breastfeeding for 12 months with ARV coverage for mother or baby, or exclusive replacement feeding where appropriate. As countries have rolled out these guidelines, monitoring systems have not yet yielded data on the success of efforts to maintain ARV coverage throughout the breastfeeding period, leaving much uncertainty about the impact of guideline implementation on breastfeeding transmission.

Family planning

Rates of unintended pregnancies in countries with high HIV prevalence range from 14% to 58% of all births, and studies have found rates as high as 84%–90% among HIV-positive women.[14–15] Additional studies have suggested an association between unintended pregnancies and late ANC attendance, as well as pre-term births, all of which can place infants at higher risk of MTCT.[16] A study in Uganda found high rates of unintended pregnancies among women on ART, suggesting the need to improve provision of family planning services for ART clients.[17]

Reducing new infections

Reducing HIV incidence among young women will be critical to achieving EMTCT. Women under the age of 25 continue be at highest risk for HIV infection,[18] with social and economic factors playing a major role in increasing the vulnerability of young women to HIV.[19] Lack of strong partnerships between HIV program implementers and those involved in HIV prevention among adolescents is an additional obstacle to reducing HIV incidence in this population.

This issue of *Haba Na Haba* features a variety of approaches being undertaken by EGPAF and its partners, with donor support, to empower health facilities and communities to own and manage their health services and resources devoted to EMTCT. For example, EGPAF's Swaziland program, in addressing the high rate of new HIV infections during pregnancy, has made primary prevention of HIV infection in pregnant women a high priority in their National Strategic Framework (see page 12). In Uganda, where the fertility rate is more than six births per woman and 41% of women have unmet family planning needs,[20] integration of family planning into HIV services at an EGPAF-supported facility led to a dramatic increase in contraceptive coverage (see page 22). The EGPAF Zimbabwe program, working with the Ministry of Health and Child Welfare and other in-country partners, has made rapid progress in scaling up provision of more efficacious PMTCT regimens and services that support their delivery throughout the entire country (see page 17).

HIV counselor conducting an HIV test on a boy in Turkana County, Kenya.

Country Plans

The Global Plan achieved nearly universal support from priority countries and implementing partners around the world. The Plan calls on the 22 priority countries to "Frame It, Advocate for It, Do It and Account for It," through the development of national plans and targets before the end of 2011. As an initial step in developing national plans, countries had to estimate their national baseline MTCT rates. The MTCT rate at 6–8 weeks of age, as determined by early infant HIV diagnosis (EID), has often been used to measure progress in PMTCT. However, significant HIV exposure continues throughout breastfeeding; therefore, early MTCT rates are not as accurate as rates from testing at 18–24 months of age. Moreover, the proportion of HIV-exposed infants who undergo EID is below 50% in many of the 22 priority countries,[12] making use of these data to assess PMTCT program performance even less reliable. For these

reasons, reliance on EID positivity rates to estimate an overall MTCT rate can result in an underestimation of the actual rates of transmission.[9]

With UNAIDS, countries conducted a modeling exercise using Spectrum (WHO HIV modeling software), which factors in EID data limitations, to estimate their actual baseline MTCT rates at the end of the breastfeeding period. Some found that their national MTCT rates were much higher than anticipated, even exceeding 20%. These higher—and probably more realistic—rates took into account not only those mother–baby pairs who completed the PMTCT cascade, but also those who did not receive or had no access to PMTCT services.[10] *See page 12 for more information on national planning around elimination of pediatric HIV in Swaziland and page 16 for information on similar efforts in Rwanda.*

Based on EGPAF's engagement in developing national elimination plans, several factors have emerged as having contributed to the success of processes to develop these plans, including:

- **political leadership** at the highest level and development of processes to ensure that plans are developed and implemented.
- **strong analyses** of PMTCT service data, including service coverage, uptake, and retention; current MTCT rates; contraceptive prevalence rates; maternal and infant mortality rates; HIV incidence in women 15–49 years old; sources of new HIV infections among women; and bottlenecks in service delivery.
- **robust country-level analysis** to inform the choice of Option A or B (of the 2010 WHO PMTCT guidelines), with input from communities and other key stakeholders and based on the specifics of the epidemic as well as health infrastructure and resource availability.
- **broad and strong partnerships** across Ministry of Health units and other government stakeholders (finance, education, civil service); civil society stakeholders, including persons living with HIV; community-based organizations; and HIV prevention and treatment groups.
- **broad focus** on all four prongs of PMTCT, along with crosscutting areas (laboratory, infrastructure, etc.) and a realistic plan for overcoming human resource limitations.
- **innovation and vision** among countries bold enough to ask themselves "what must we do differently."
- **realistic and prioritized plans** with accurate cost projections and strategies to mobilize resources to implement the plan and set priorities for each year in line with available resources.

Health Systems Strengthening

An area of emphasis in all country plans has been improving the uptake and quality of PMTCT services. Efforts to improve facility-based services have yielded measurable success; however, barriers to accessing ANC (coupled with PMTCT services) and institutional delivery, low uptake of interventions, and poor service quality continue to plague programs. When attention is turned to the systems within which programs operate, human resource gaps, poor performance, stock-outs, and poor infrastructure emerge as barriers that must be addressed to support PMTCT scale-up.[21] The strengthening of these elements requires investment in, and in some cases reengineering of, health facilities and national systems. *See page 18 for related experiences from EGPAF's Kenya program.*

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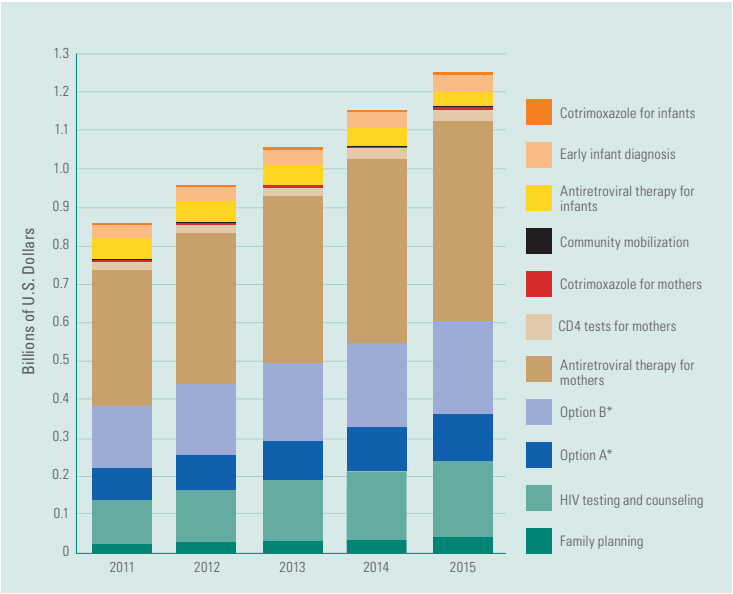
Figure 2. Needed investments in the 22 priority countries for implementation of the Global Plan

Source: UNAIDS.[9]



*Option A: Twice daily AZT for the mother and infant with either AZT or nevirapine for six weeks after birth if the infant is not breastfeeding. If the infant is breastfeeding, daily nevirapine infant prophylaxis should be continued for one week after the end of the breastfeeding period.

*Option B: A three-drug prophylactic regimen for the mother taken during pregnancy and throughout the breastfeeding period, as well as infant prophylaxis for six weeks after birth, whether or not the infant is breastfeeding.

The Global Plan recognizes the need for increased resources and careful costing of national plans. In addition to investments in PMTCT-specific interventions (as shown in Figure 2 on page 5), the need for additional investments in infrastructure and human resources exceeds available funding.[9] Country plans must address the key barriers to achieving elimination of MTCT and these costs should be reflected in national budgets. *See page 14 to learn about Lesotho's experience costing its national plan for EMTCT.*

Human Resources

One of the largest barriers to achieving the goals of the Global Plan is the lack of trained and motivated health-care personnel at all levels of the health system. EGPAF has supported the addition of staff at national, district, and facility levels, in addition to supporting preservice and in-service training and mentoring for health facility staff to strengthen their clinical and management capacities.

EGPAF has also worked with countries to answer the question of "how" to address the human resource issue. One resulting recommendation is to reduce the frequency of staff rotations so that a core trained team can provide and monitor services. This approach could use donor and Ministry of Health funding more efficiently by reducing the need for constant training of new staff. This suggestion has generated further dialogue about the purpose and benefits of staff rotations and served as a catalyst for formulating creative approaches to increase expertise and improve organization at facilities. *See page 9 for an update on regional efforts to address human resource for health issues*.

Several national EMTCT plans include specific actions to address human resource challenges. Even before finalization of these plans, many countries have started to implement some of the recommended approaches:

- Ethiopia, Malawi: Use of health extension workers expanded.
- Uganda, Lesotho, Swaziland, Kenya, Zimbabwe, and others: Use of community health workers and volunteer staff.
- Lesotho, Swaziland, South Africa, Kenya, and others: ART is provided in MCH by nurses.
- Lesotho, Malawi, Côte d'Ivoire, and Mozambique: Preservice training has been greatly expanded to address shortages.
- Swaziland: Frequency of staff rotations has been reduced.
- Lesotho: Staff are employed permanently in district facilities.
- Malawi: Salary top-ups of approximately 50% have been given to Ministry of Health (MOH) staff.
- Swaziland: Managerial capacity of health managers is being built so accountability can be improved.

Maternal and Child Health

Of the countries with more than 20% of maternal mortality attributed to HIV, 14 are among the 22 priority countries identified in the Global Plan.[22] According to UNFPA, without HIV, the maternal mortality rate in sub-Saharan Africa would be 450 instead of 500 per 100,000 live births.[22] The Global Plan includes a target of reducing HIV-related maternal and child mortality by 50% globally by 2015. To achieve this, PMTCT services must be fully integrated within strengthened MCH systems and HIV service implementers must address the long-standing challenge of high maternal and child mortality that continues to plague developing countries. MCH systems across Africa have suffered from poor investment over the years, often operating in dilapidated conditions with few staff, poor management, outdated standards of care, and lack of opportunities for health personnel to update their skills.[21]

The current renewed focus on elimination of pediatric HIV provides a unique opportunity to leverage resources that can dramatically reduce new HIV infections in children while also strengthening the MCH systems needed to substantially reduce overall maternal and infant mortality.[23] Whereas HIV programs can strengthen health services in various ways, the availability of good-quality MCH services for all women, which is central to achieving the goals of the Global Plan, will require significant investment in both HIV and MCH service delivery.

One of the primary reasons that high-income countries have been successful in reducing rates of MTCT to less than 2% is that HIV care and treatment services are well integrated into strong existing MCH services.[24] Because PMTCT services are often provided within the MCH system in resource-limited countries, it is perhaps surprising that MCH and PMTCT service programs often do not collaborate to achieve synergistic success. PMTCT services have often focused more narrowly on specific services, such as HIV testing and provision of ARVs, while MCH services continue to struggle with antiquated systems and fewer resources to ensure women have healthy pregnancies, deliver safely, and that women and children receive appropriate postnatal care. Achieving what is often referred to as "HIV-MCH integration" will require broader efforts to ensure provision of high-quality HIV diagnostic, care, and treatment services within settings equipped to comprehensive address the varied health needs of women and children. *See page 33 to learn about how EGPAF Lesotho is working together with the Ministry of Health and Social Welfare and UNICEF to integrate PMTCT services into MCH settings*.

ARV Regimens and Adherence

With the implementation of the 2010 WHO PMTCT guidelines, one challenge to achieving EMTCT has taken on more urgency: adherence

to ARV prophylaxis or treatment during pregnancy and breastfeeding. Clinical studies and real-world program evidence consistently show that poor adherence to prophylaxis or treatment regimens can substantially diminish their potential benefits. A study in Zambia looking at implementation of ART for all HIV-positive pregnant women (Option B of the 2010 WHO guidelines) at select sites found that MTCT rates were below 6% at 12 months postpartum. But when deaths and losses to follow-up were factored in, the benefit of this approach over the prior standard PMTCT approach (which followed the 2006 WHO guidelines) was substantially reduced.[25] A study from South Africa, performed by EGPAF International Leadership Awardee Landon Myer, found a consistently higher level of loss to follow-up among pregnant women than in non-pregnant women on ART, especially in the first two months after treatment initiation.[26] These two studies, in combination with other studies and the paucity of data on ARV adherence during pregnancy and breastfeeding, point to serious systems issues that still stand in the way of EMTCT.

There continues to be discussion in the 22 priority countries about which 2010 WHO PMTCT option should be adopted: Option A, B, or B+ (the latter of which was devised by Malawi to provide ART for life for all HIV-positive pregnant women). WHO released an update in April 2012 considering new scientific evidence and its implications for EMTCT.[27] This update focused on discussions of moving to a single universal PMTCT regimen, through use of ART for all HIV-positive pregnant women. Current evidence suggests that each of the regimens recommended in the 2010 guidelines is equally efficacious for PMTCT; however, they have notable differences in cost, infrastructure requirements, and implementation challenges. Option B holds much appeal, and there is compelling evidence that ART for all HIV-infected persons not only benefits the health of those treated, but also reduces transmission in the community at large.

Even more important than the choice of regimen, however, is ensuring that the health system is able to provide reliable access for women to receive whatever regimen is used. Improving access to high-quality PMTCT services for the 50% of pregnant women who currently are not reached and integrating these services within a maternal, neonatal, and child health system that provides care for women and children through pregnancy, delivery, and breastfeeding are critical elements to achieving EMTCT.[28]

Further elaboration on how to prepare health systems to provide the recommended PMTCT regimens is an urgent need, particularly as guidelines and regimens will continue to evolve. Countries are faced with a flat or declining funding base, fragile health systems, inadequate numbers of qualified health workers, multiple social/cultural challenges, and weak ART retention rates, especially among pregnant women. The limited human resources available to properly expand ART services must also be given adequate consideration.

Consideration and/or planning for a shift to Option B or B+ would be better informed through more complete, longitudinal, patient-level data to address significant knowledge and implementation gaps. In most countries, these data cannot be collected within routine program activities and thus require careful consideration on how to best generate the evidence needed to inform future guideline revisions and subsequent scale-up. Evidence needed includes information regarding the acceptability of PMTCT regimens, drug adherence and resistance, retention in care, drug safety in women and their infants, and health system capacity. As MOH teams work with global and national stakeholders to determine the best way forward for each country, EGPAF is committed to supporting the development, planning, and optimal implementation of policies leading to elimination of pediatric HIV, as well as operations research and systems enhancements to build the evidence base on these practices.

Monitoring Progress

Successful implementation of EMTCT initiatives requires the availability of appropriate data to demonstrate progress and gaps in implementation. The lack of routine mechanisms to longitudinally track pregnant women or mother–baby pairs and monitor PMTCT adherence throughout pregnancy and breastfeeding greatly hinders the ability of programs to improve adherence to the PMTCT cascade. While the new Interagency Task Team on the Prevention and Treatment of HIV Infection in Pregnant Women, Mothers, and Children (IATT) Global Monitoring Framework and Strategy[29] supports a shift to measuring the impact of interventions rather than just their scale-up, modifying existing country systems to achieve this will require significant effort.

Country data monitoring and evaluation systems are usually paper-based, and often lag behind implementation of new PMTCT guidelines. Development and dissemination of revised registers to facilities requires a long process of piloting, approval, and procurement. Investment in electronic databases has been prioritized in vertical programs such as ART clinics, but not yet in maternal, neonatal, and child health (MNCH) facilities or the broader health system. *See pages 17 and 23 on related work in Zimbabwe and Cameroon.*

In addition, the collection of data that accurately describe the services provided continues to challenge implementers. EGPAF's quality improvement (QI) efforts have uncovered the potential causes of programmatic gaps in several countries, but documentation is often poor and must be

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International Partnerships to Support Implementation of the Global Plan

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Launched in June 2011, the Global Plan for the Elimination of New HIV Infections Among Children by 2015 and Keeping Their Mothers Alive is structured around four areas: (1) framing the argument for a collective global effort to eliminate mother-to-child HIV transmission and keep mothers alive; (2) leadership for high-level political support, resource mobilization, and communication; (3) actions for country-level implementation; and (4) accountability.

Cochaired by UNAIDS and the U.S. Office of the Global AIDS Coordinator, the Global Steering Group (GSG) was established to provide high-level leadership and accountability for the Global Plan. The GSG has a support team to provide secretariat functions and oversight of implementation of the Plan's components related to advocacy, communications, resource mobilization, and overarching accountability.

The Interagency Task Team (IATT) on the Prevention and Treatment of HIV Infection in Pregnant Women, Mothers and Children—which is cochaired by UNICEF and WHO and composed of members from United Nations agencies, donors, and implementers—is the central technical partner and global coordination mechanism to support country-led implementation and progress tracking (with a focus on 22 priority countries) of the Global Plan. The IATT coordinates with the GSG to ensure coordinated country-level support and communication, and it will provide regular progress reports on technical assistance, monitoring and evaluation, and other technical issues (see Figure 3).

Within the Global Plan, the IATT has been charged with ensuring the coordinated provision of technical support and will work to ensure that its members and other key technical global and regional actors support national steering groups, prevention of mother-to-child transmission (PMTCT) technical working groups, and other designated bodies in the development and revision of national PMTCT implementation plans. The IATT will also ensure global and national accountability toward the goal of elimination of mother-to-child transmission of HIV (EMTCT) through the development of measures for tracking progress and definition of specific actions that need to be taken to ensure targets are set and monitored at the country level. The IATT will also continue to contribute significantly to the development of new or updated technical guidelines and operational guidance relevant to the EMTCT agenda, including improved integration of PMTCT and maternal and newborn health services and management as well as the introduction of innovative technologies and approaches to improve effectiveness and equity.

For more information about Elizabeth Glaser Pediatric AIDS Foundation's contribution to the IATT, contact cpitter@pedaids.org.

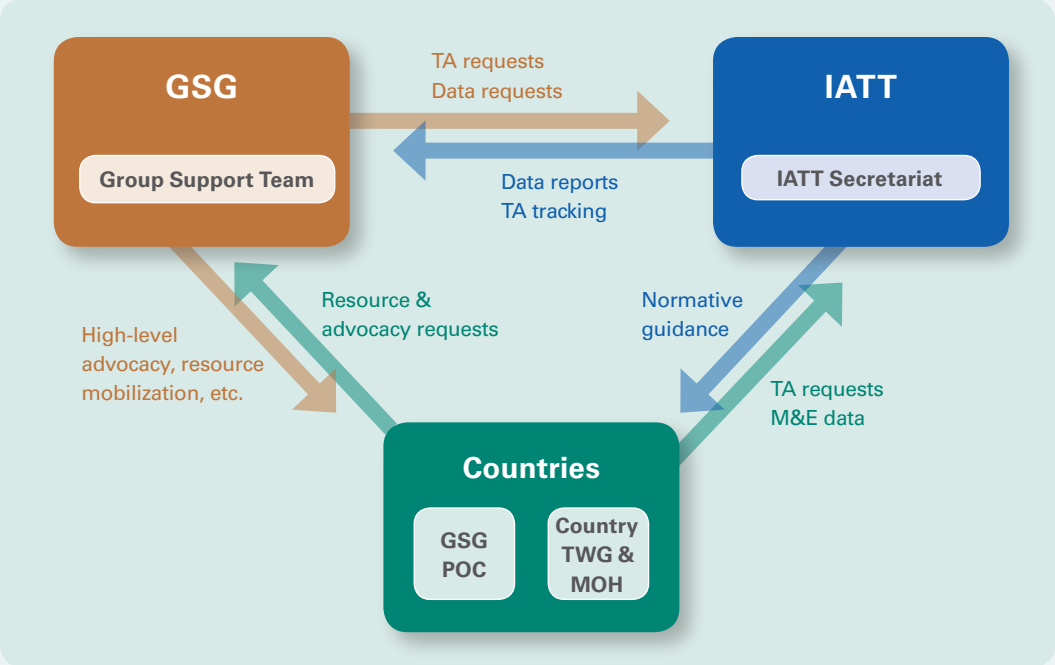

Figure 3. Relationship between the Global Steering Group (GSG), Inter-Agency Task Team (IATT), and country programs

MOH=ministry of health; POC=point-of-contact; TA=technical assistance; TWG=technical working group

Regional Efforts to Support Elimination of New HIV Infections in Children

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In November 2011, the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) partnered with UNICEF to host a pre-meeting on elimination of mother-to-child transmission of HIV (EMTCT) preceding the 54th East, Central and Southern Africa Health Community (ECSA) Health Ministers' Conference in Mombasa, Kenya. Ministry of health representatives from the 14 ECSA countries attended the pre-meeting, including directors of reproductive and child health, prevention of mother-to-child transmission (PMTCT) program managers, and chief nursing officers. The goal of the pre-meeting was to advocate for ECSA countries to increase their focus on EMTCT and start the process of generating a resolution to be adopted by ECSA ministers of health. This resolution would then serve as a mechanism for holding member countries accountable for their progress toward elimination of new pediatric HIV infections.

EGPAF country-level, regional, and global representatives attended the pre-meeting. Meeting participants discussed progress to date as well as barriers to elimination of pediatric HIV, including shortages in the health-care workforce, limitations in service delivery, and the need for increased governance and leadership as well as national mechanisms for tracking progress using available data. The challenge of frequent staff rotations was discussed with program leaders and their nursing managers, revealing some of the reasons for the rotations and opening discussion on ways to address them. Participants also initiated a dialogue on how some of these challenges can be addressed through strong partnerships with ministries of health.

During the ECSA Health Ministers' Conference that followed, member states adopted a resolution to implement targets related to elimination of pediatric HIV and report back at the next annual ECSA meeting on progress made. Kenya, Lesotho, Malawi, and Swaziland are among the countries that have already enacted policy changes to address some of these challenges. EGPAF will continue to support initiation of such changes through its involvement in advocacy efforts at the national, regional, and global levels via mechanisms such as the regional Inter-Agency Task Team (IATT) on Children Affected by HIV and AIDS.

The ECSA Secretariat is providing financial and technical support to member states to achieve the agreed upon targets over the course of one year (July 2012 to July 2013). To read the resolutions developed during the conference, visit http://www.ecsa.or.tz/downloads/Resolutions%20of%20the%2054th%20HMC.pdf.

For more information on EGPAF's regional advocacy work, please contact Rhoda Igweta (rigweta@pedaids.org).

corrected to adequately monitor progress. *See pages 24 and 26 for examples of how this has been addressed in Malawi and Kenya.*

Conclusion

There has been significant progress in global and country efforts to eliminate new pediatric HIV infections. The perspectives from countries show that there are still great challenges that will require intensive efforts on many levels to move health systems forward in a way that will ensure access for all pregnant women to high-quality, comprehensive health services.

The HIV epidemic could be controlled if every HIV-positive individual was diagnosed and immediately treated with lifelong ART in the context of appropriate monitoring and care, effective systems for adherence and retention in care, a robust supply chain, and sustainable resources. While these realities do not exist currently in many developing countries, progress toward establishing such systems will be realized facility by facility and health worker by health worker, through the hard work of all stakeholders.

EGPAF will continue to be at the forefront of working with countries to address and overcome challenges as it moves toward elimination of pediatric HIV. This will involve continued participation in the development of country plans for elimination of new HIV infections in children, as well as the development of appropriate policies to advance the EMTCT agenda and the implementation of effective PMTCT services that are integrated within strengthened MNCH systems.

In Elizabeth Glaser's words, "Sometimes in life there is that moment when it's possible to make a change for the better. This is one of those moments."

Harnessing the Power of Community-Driven Program Design

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As consensus forms on potential pathways to eliminate mother-to-child transmission of HIV (EMTCT) in the most heavily HIV-affected countries, there is growing acknowledgment that community-centered design and delivery of HIV services will be critical to the success of these efforts.[1] Some of the key principles informing EGPAF's approach to involving communities in HIV/AIDS program implementation are presented herein.

When mobilized, communities can organize to protect the vulnerable and advocate for their health needs. In Tanzania, the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) Community Linkages Team follows a structured process for establishing relationships and communications within a community, building capacity in the process. In the Nanyumbu District, after sensitization on the importance of institutional deliveries, village health committees began identifying and registering pregnant women. Community members were then able to follow up with pregnant women and support their antenatal clinic attendance, and community birth attendants (who traditionally conduct home births) were successfully prepared by EGPAF to escort mothers to health facilities for delivery.

Communities must own commitment to eliminating mother-to-child transmission of HIV. In Lesotho, the National Pediatric AIDS Elimination Plan emphasizes the role of communities in supporting mothers, children, and families to access and adhere to health services. With support from a range of implementation partners, including EGPAF, the Ministry of Health and Social Welfare holds district HIV prevention symposiums for district HIV stakeholders, chiefs, councilors, people living with HIV, traditional healers, religious leaders, staff of community-based organizations, and members of women and youth groups. During the symposiums, participants receive updates on HIV prevention interventions. These events offer an opportunity to ensure major stakeholder groups commit to guiding and implementing HIV prevention activities toward the elimination of pediatric HIV.

Communities have assets that can be galvanized to address child survival and maternal health. Skilled and motivated citizens are a community's greatest asset. In Tanzania, the EGPAF's Community Linkages Team started working with *Laigwenans* (Maasai leaders) in the Ngorongoro District. Team members and Laigwenans established a process for messaging on the importance of using health services to the local residents, who are likely to heed the advice of respected community leaders. Clinic staff report that general clinic attendance, prevention of mother-to-child transmission service uptake, and antiretroviral therapy adherence are improving as a result of this effort.

EGPAF will continue supporting similar efforts to help communities play a pivotal role in efforts toward EMTCT.

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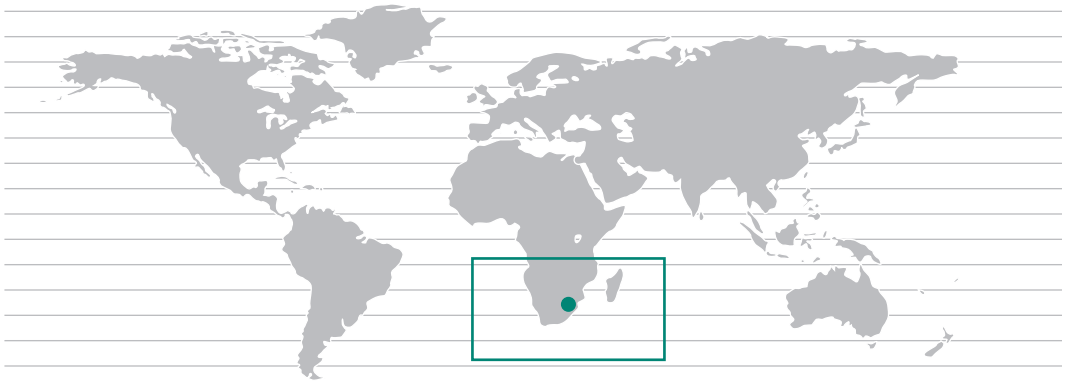
Country Program Notes



SWAZILAND:

Planning for Impact: Development of a National Strategic Framework for Elimination of Pediatric HIV

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The Elizabeth Glaser Pediatric AIDS Foundation has been supporting prevention of mother-to-child transmission of HIV (PMTCT) service delivery in Swaziland since 2004. Since the program's inception, EGPAF-supported sites in Swaziland have provided more than 125,000 women with PMTCT services and enrolled more than 8,500 HIV-positive clients for antiretroviral therapy (as of December 31, 2011).

Background

In 2011, 81% of all pregnant women attending antenatal care (ANC) services in Swaziland had a known HIV status and 76% of all HIV-positive pregnant women received a full course of antiretroviral (ARV) prophylaxis for prevention of mother-to-child HIV transmission (PMTCT). A Spectrum analysis (a modeling tool to support decision making) conducted by the Swaziland Ministry of Health and Social Welfare (MOHSW) and UNAIDS estimated a national mother-to-child transmission (MTCT) rate of 12% by end of the breastfeeding period.[1] Following full implementation of the 2010 WHO PMTCT guidelines in 2011, the MOHSW is now looking to reduce MTCT rates to less than 5% by the end of 2015.

Also in 2011, the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) received PEPFAR funding through USAID for a new project titled Eliminating Pediatric AIDS in Swaziland (EPAS). As part of this project, EGPAF supported the MOHSW to develop a national plan for elimination of MTCT (EMTCT) following the release of the UNAIDS Global Plan in that same year.

Progress Toward Elimination of Mother-to-Child Transmission

The MOHSW, with support from partners including EGPAF and UNICEF, has completed the following key activities in its efforts toward EMTCT:

1. **Development of a steering committee for the EMTCT agenda.** The MOHSW Directorate identified the honorable minister of health as the champion for EMTCT. In June 2011,

the MOHSW developed a national steering committee to coordinate the development and implementation of the National Elimination Strategic Framework.[2] The steering committee is chaired by the MOHSW deputy director of public health, who drew other members from among Swaziland's HIV service implementers. The committee's main objective is to address all four prongs of PMTCT (see page 2).

2. **A rapid PMTCT gap analysis.** In June 2011, the committee conducted a gap analysis of the country's 2010 PMTCT program data to identify areas of weakness that need to be addressed to reach EMTCT by 2015, the results of which are shown in Figure 4. Causes attributed to the identified gaps included untimely and inconsistent ANC attendance during pregnancy, low uptake of all four recommended ANC visits, private facilities offering ANC without PMTCT services, limited coverage of HIV care and treatment, limited uptake of ARV prophylaxis among HIV-positive pregnant women and their exposed infants, health systems challenges (e.g., shortages of trained health personnel, weak linkages and systems for cross-referral, inadequate infrastructure and equipment, and a weak supply chain management system), and community systems challenges (e.g., stigma, weak linkages and referral mechanisms between communities and facilities, and lack of community knowledge and information on HIV protective behaviors). A separate analysis of Swaziland's PMTCT data suggested that the high rate of new HIV infections during pregnancy was a significant contributor to MTCT.[3]

3. **Development of the National Elimination Strategic Framework.** The steering committee developed the National Elimination Strategic Framework in November 2011. The Elimination Framework was aligned with the National Multi-Sectoral Strategic Framework for HIV and AIDS 2009–2014,[4] the National Health Sector Strategic Plan 2008–2013,[5] the Monitoring and Evaluation Framework 2008–2013,[6] and the Integrated Sexual Reproductive Health Strategic Plan 2008–2013[7] and was designed to answer the question "what will it take to eliminate pediatric HIV in Swaziland?"

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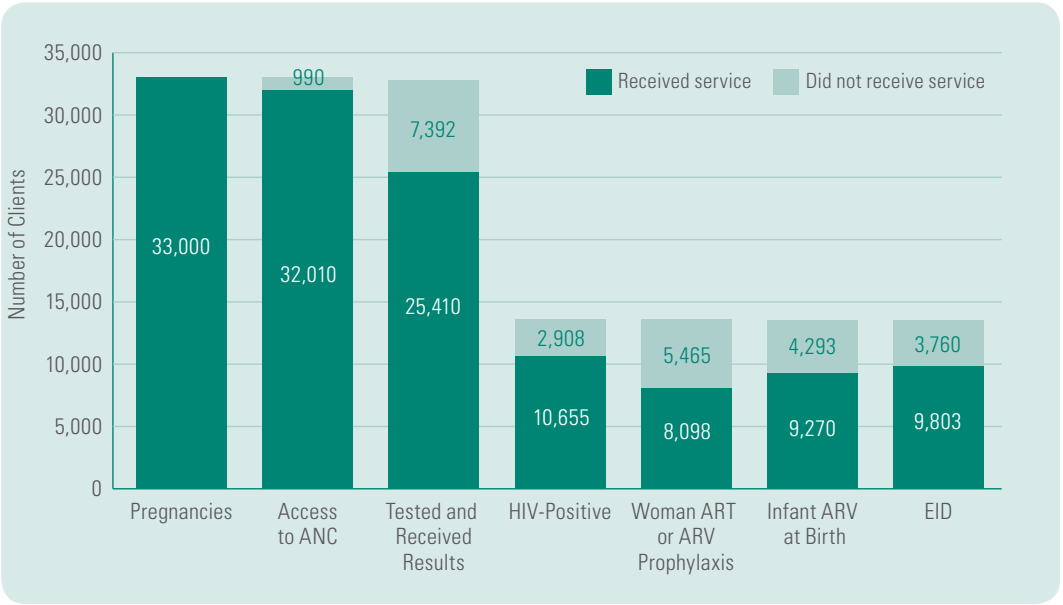

Figure 4. Swaziland PMTCT gap analysis results (2010)

Sources: PMTCT Gap Analysis 2011, MOH and EGPAF.

Note: The number of pregnancies was obtained from United Nations Population Division 2010 estimates. All the other indicators were obtained from the National HMIS Database for the 150 facilities providing PMTCT services in 2010.

ART=antiretroviral therapy; ARV=antiretroviral; EID=early infant diagnosis

LESOTHO:

Assessing Resource Requirements: Costing the National Strategic Plan for Elimination of Mother-to-Child Transmission of HIV

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The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) has been working in Lesotho since 2006 and to date has supported delivery of prevention of mother-to-child transmission (PMTCT) of HIV services to more than 110,000 pregnant women. Since the program's inception, EGPAF-supported HIV care and treatment sites in Lesotho have enrolled more than 76,000 people living with HIV on antiretroviral therapy, including more than 3,500 children under the age of 15 years (as of December 31, 2011).

Background

On December 1, 2011 (World AIDS Day), Lesotho marked its commitment to the global call for elimination of pediatric HIV by launching the National Strategic Plan for Elimination of Mother-to-Child Transmission of HIV and for Pediatric HIV Care 2015/2016. The goal of the plan is to reduce the rate of mother-to-child transmission (MTCT) of HIV in the country to under 5% by 2016. To achieve this goal, the plan outlines key targets (see Box 1), a spectrum of crosscutting strategies, and the costs of implementing proposed strategies. The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), as part of its support to the Ministry of Health and Social Welfare (MOHSW), contributed to the development of this plan as a cochair of the national PMTCT and Pediatric HIV Technical Advisory Committee.

Lesotho is well positioned to achieve the goal of virtual elimination of MTCT (EMTCT), despite an estimated HIV prevalence in antenatal care (ANC) clinics of 27%.[1] The country has made significant progress over the last 10 years in scaling up PMTCT services, which were first introduced in the country in 2003 and are now available in 100% of public health facilities.[2,3] Lesotho has a national ANC attendance rate of 91.8% and an HIV testing rate of 82.7% among ANC attendees, which will serve as an important foundation for the strengthening of interventions serving pregnant women.[1]

Costing Framework

A framework to determine the cost of fully implementing the elimination plan was developed according to eight strategic areas (see Box 2), which were defined and broken down into individual sets of activities as determined through consultative meetings with key

Box 1. Key Targets of Lesotho's Strategic Plan for EMTCT

Lesotho's Strategic Plan includes the following targets that must be reached to achieve virtual elimination of MTCT:[2]

- increase ANC attendance by at least 1% each year over the next five years;
- increase the proportion of HIV-positive pregnant women receiving antiretroviral (ARV) prophylaxis or treatment to 100% by 2016 (from 81% in 2010);
- increase the proportion of HIV-exposed infants under two months of age undergoing DNA polymerase chain reaction (PCR) testing to 95% by 2016 (from 30% in 2011);
- increase the proportion of infants receiving exclusive breastfeeding through six months of age to 95% by 2016 (from 88% in 2010);
- increase the proportion of HIV-exposed infants who receive follow-up HIV testing at 18 months of age (to detect breastfeeding transmission) to 95% by 2016 (from 17% in 2011); and
- reduce the MTCT rate at breastfeeding cessation to 4.6% by 2016 (from 13.0% in 2011).

Box 2. Strategic Areas of the Lesotho EMTCT Plan

1. Prevention of HIV infection among HIV-negative women and men of reproductive age
2. Prevention of unintended pregnancies
3. Prevention of mother-to-child HIV transmission
4. Increasing access to quality HIV treatment, care, and support for HIV-positive women, their male partners, and their families
5. Promoting access to quality pediatric HIV treatment, care, and support for all HIV-infected infants, children, and adolescents
6. Integrating services directed toward HIV prevention and treatment as well as maternal, neonatal, and child health
7. Strengthening health systems
8. Coordinating and collaborating efforts between government and all relevant stakeholders

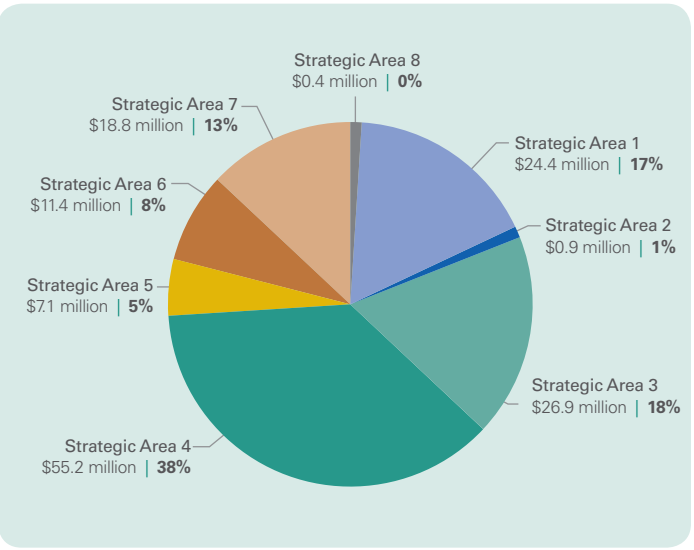
stakeholders and supplemented by national population data and programmatic documents from the MOHSW and others. Costs were estimated through a market price survey, financial and programmatic document reviews, and consultations with key informants from the MOHSW and partners. Assumptions in guiding cost estimates included standard rates for inflation, currency exchange, and HIV prevalence in ANC.

Cost Breakdown

Using the cost analysis framework, the total expense for achieving EMTCT nationally by 2016 (exclusive of resources already in the national system) was estimated at just over US$145 million.[2] The distribution of costs varied greatly by strategic area, with increasing access to quality HIV treatment, care, and support for HIV-positive women, their male partners, and their families (strategic area 4) requiring the largest outlay of resources (see Figure 5). Costs of implementing the full plan are expected to be at their highest during the first two years of implementation, largely due to baseline procurement of equipment, but are projected to steadily decline each year (see Figure 6).

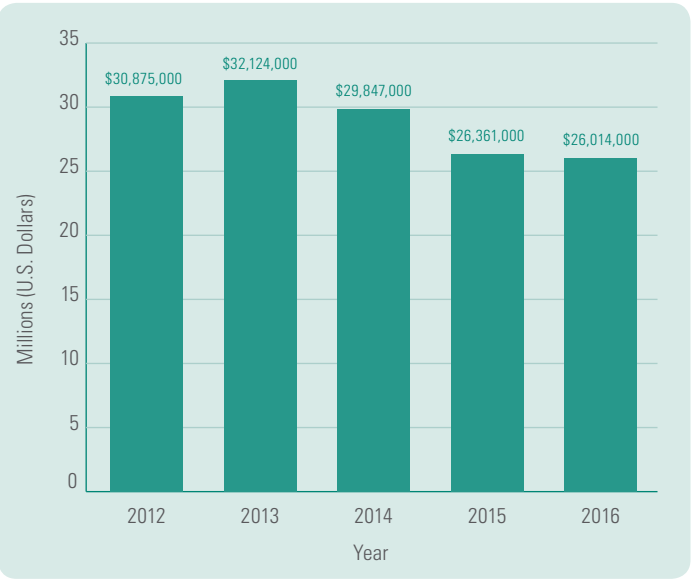
Based on greater than 90% ANC attendance rates among all pregnant women and the assumption that each mother–baby pair will receive ANC over a 19-month period (28 weeks intrapartum and 12 months postpartum), provision of comprehensive PMTCT services, including antiretroviral therapy (ART) for treatment-eligible pregnant women, will cost an estimated US$266 per mother–baby pair seeking ANC over the next five years.

Figure 5. Proportion of costs per strategic area (in USD)



Notes: Costs for prevention of unintended pregnancies (strategic area 2) appear low as most of the expenses for these activities are covered under preexisting funding mechanisms. Costs for strategic area 4 include procurement of opportunistic infection and tuberculosis drugs as well as cotrimoxazole and nutritional supplements.

Figure 6. Estimated total cost per year for implementation of Lesotho's plan for EMTCT (in USD)



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RWANDA:

The Power of Leadership Engagement: Developing a National Plan for Elimination of Mother-to-Child Transmission

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EGPAF president and CEO, Chip Lyons, greeting the First Lady of Rwanda, Jeannette Kagame.

Elizabeth Glaser Pediatric AIDS Foundation's (EGPAF's) Rwanda program began in 2000 with provision of technical support to the national prevention of mother-to-child transmission (PMTCT) of HIV program. EGPAF has since expanded its support to 47 PMTCT and HIV care and treatment sites in the country, which have provided PMTCT services to more than 240,000 pregnant women and have provided more than 12,000 HIV-positive individuals with antiretroviral therapy.

The government of Rwanda and its partners in the national HIV response are committed to reducing the mother-to-child transmission (MTCT) of HIV rate to 2% by 2015. The country's prevention of MTCT (PMTCT) program made significant strides in improving and expanding service coverage (89% facility coverage nationwide) and quality of care since its inception in 1999.[1]

Rwanda moved very quickly to adopt the WHO rapid advice on PMTCT issued in 2009. At the end of that year, the first in a series of meetings of the Technical Working Group (TWG), of which EGPAF is an active member, took place to discuss the selection of PMTCT Options A or B. After performance of a literature review and cost analysis to determine which option would be best suited to the Rwandan context, the TWG selected Option B in early 2010. In November 2010, TRAC Plus, now the Division of HIV/AIDS, STIs and Other Blood-Borne Infections within the Rwanda Biomedical Center (RBC), launched the new PMTCT protocol nationally.

In March 2011, a regional consultation on the elimination of MTCT (EMTCT) in eastern and southern Africa was held in Nairobi, and a regional framework for EMTCT was endorsed by 15 high-burden countries and United Nations agencies. In Rwanda, the RBC and UNICEF provided feedback to the TWG on the outcomes of the regional meeting, which propelled the TWG into the creation of a national strategic plan on EMTCT.

The drive toward EMTCT was fully endorsed by the government. In May 2011, the First Lady of Rwanda, Jeannette Kagame, launched a national initiative for EMTCT at the Ruhuha Health Center in Bugesera, an EGPAF-supported district. The following month, President of Rwanda Paul Kagame and the First Lady showcased Rwanda's EMTCT model to world leaders at the UNAIDS meeting to launch the Global Plan.

The First Lady initiated a campaign to create countrywide awareness of the prioritization of EMTCT. As part of the campaign, titled the First Lady's Action to Eliminate Mother-to-Child Transmission of HIV, 18 journalists and parliamentarians were informed on efforts for mobilizing communities to address EMTCT bottlenecks. Some of the communication strategies used included talk shows on community and national radio programs led by parliamentarians, local authorities, and health facilities managers; meetings among provincial governors; campaign officials attending monthly district meetings of all 30 districts to deliver messages about EMTCT; and the creation of an elimination-of-pediatric-HIV awareness day on June 3, 2011, during which awareness events were organized at all 381 PMTCT sites in the country.[2]

In May 2011, to evaluate PMTCT performance and to outline priority interventions and EMTCT indicators for data collection and review, the TWG divided membership into subgroups following the

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ZIMBABWE:

Using Innovative Approaches for Rapid National Scale-Up of Prevention of Mother-to-Child Transmission Services

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EGPAF Zimbabwe country director, Dr. Agnes Mahomva, hands over a point-of-care CD4 analyzer to Zimbabwe minister of health, Dr. Henry Madzorera.

As of December 31, 2011, the Elizabeth Glaser Pediatric AIDS Foundation–supported program in Zimbabwe had reached more than one million pregnant women with HIV counseling and testing, and had provided more than 162,000 HIV-positive pregnant women and more than 119,000 HIV-exposed infants with antiretroviral prophylaxis.

Background

Zimbabwe's health system is challenged by a depressed economy and an estimated adult HIV prevalence of 14.3%.[1] Despite these and other challenges, strong political commitment and donor support has led to a recent expansion of prevention of mother-to-child transmission (PMTCT) service coverage and health infrastructure toward elimination of new pediatric HIV infections. The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), with funding from PEPFAR through the U.S. Agency for International Development (USAID) and from private donors, collaborated with the Ministry of Health and Child Welfare (MOHCW) in 2010 to improve and rapidly scale up the national PMTCT program.

Rolling Out the Revised National PMTCT Guidelines

In 2011, EGPAF's Zimbabwe program underwent a massive expansion to support the delivery of comprehensive, quality PMTCT services to 60 (of 62) districts of the country following national adoption of the 2010 WHO PMTCT guidelines (Option A). EGPAF and three sub-grantees supported the MOHCW to implement several strategies to strengthen PMTCT service delivery, including revision of the national PMTCT training curriculum to reflect the revised national guidelines, introduction of a District Focal Person (DFP) cadre within the district health management structure, and intensive health worker training and supportive supervision. Additional strategies included the roll-out of point-of-care (POC) CD4 testing at high-volume PMTCT facilities, advocacy and training for antiretroviral therapy (ART) initiation in antenatal care (ANC) clinics, piloting of an electronic database for collection of longitudinal patient data (see related sidebar on page 31), and targeted community engagement and mobilization.

Under this initiative, EGPAF trained and deployed 30 DFPs to support coordination and delivery of PMTCT services in all 60 supported districts in line with the revised national PMTCT guidelines. At the end of 2011, the program was supporting 1,344 (86%) out of 1,560 PMTCT facilities nationwide. EGPAF also coordinated training for 2,653 health workers at supported facilities and deployed 50 POC CD4 machines to select sites to increase access to CD4 testing and ART initiation for HIV-positive pregnant women in MCH clinics.

Results

These efforts contributed toward rapid implementation of the revised 2010 national PMTCT guidelines, with the proportion of EGPAF-supported facilities providing antiretroviral prophylaxis in accordance with the revised guidelines increasing from 9% (124) at the end of 2010 to 99% (1,334) at the end of 2011. The 1,344 EGPAF-supported ANC facilities enrolled a total of 367,498 pregnant women between January and December 2011. Of these women, 351,867 (96%) were tested for HIV and 43,758 (12%) were HIV positive.

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KENYA:

Ensuring Access for All: Scale-Up of Prevention of Mother-to-Child Transmission Services for Non-Military Uniformed Service Personnel and Their Families in Kenya

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The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) has been operating in Kenya since 2000 and has supported provision of prevention of mother-to-child transmission of HIV (PMTCT) services to over one million pregnant women. Since the program's inception, EGPAF-supported HIV care and treatment facilities have initiated more than 97,000 individuals on antiretroviral therapy, including more than 8,500 children under the age of 15 years (as of December 31, 2011).

Background

EGPAF currently supports the Operation AIDS Response in Forces in Uniform (ARIFU) Project, a project funded by PEPFAR through the U.S. Centers for Disease Control and Prevention that is being conducted in cooperation with Kenyan AIDS Control Units (ACUs) of the Non-Military Uniformed Services (NMUS). NMUS include the Kenya Police Service, the Administration Police Service, the Kenya Wildlife Service, and the National Youth Service. This innovative project serves 121,000 uniformed services personnel (who are not allowed to access civilian health services), their families, and surrounding communities. The project's goal is to increase access to TB and HIV prevention, care, and treatment services among this often hard-to-reach population. Operation ARIFU currently supports 34 health facilities throughout the country, 21 of which now offer prevention of mother-to-child transmission of HIV (PMTCT) services (no PMTCT services were offered at these sites prior to the project).

ARIFU is aligned with Kenya's national strategy to eliminate new HIV infections among children through PMTCT interventions (a national strategy launched in June of 2011). Strategies supported by ARIFU to expand access to PMTCT services include building leadership on PMTCT service provision at health facilities, strengthening laboratory networks and sample transport systems, implementing peer counseling and support, and tracing antiretroviral therapy (ART) defaulters.

Building Site Leadership

The ARIFU staff has provided technical support to 21 PMTCT facilities since 2010. During this time, EGPAF has actively engaged leadership in NMUS camps, which has contributed to an atmosphere of increased openness and acceptance of staff living with HIV. The project provides mentorship to health-care workers at ACU and NMUS facilities (with support from EGPAF and the Ministry of Health [MOH]), sensitizes uniformed services officers and their families, and conducts door-to-door HIV counseling and testing. The project also offers technical site-level support to analyze PMTCT performance and identify gaps in delivery of HIV-related services as well as helps to develop and monitor work plans to address these gaps. EGPAF and MOH staff also offer supportive supervision at each site, which includes reviews of site performance, assessment of challenges in service delivery and data collection, and implementation of related solutions. Technical exchange visits among health facility leadership of the 21 facilities are organized by EGPAF to share successful approaches for scaling up PMTCT services at all sites, and staff at the 21 facilities offering PMTCT have been oriented on data use methods through workshops organized by EGPAF and

Table 1. Scale-Up of Select PMTCT Services at Project ARIFU Facilities

Indicator	March 2010	March 2011	March 2012
Total number of ARIFU-supported PMTCT sites	13	17	21
Women HIV-tested in ANC	516	1,136	1,426
HIV-positive pregnant women	30	37	128
HIV-positive pregnant women receiving antiretroviral prophylaxis	18	39	100
HIV-exposed infants receiving PCR testing for early infant diagnosis at six weeks	3	9	23

the MOH (workshops are attended by site managers, health records staff, and staff working in HIV clinics).

To incentivize improved performance, EGPAF implemented an award system in which facility staff nominate colleagues based on contributions to improved service delivery. Prizes are given out annually, consisting of useful facility items, such as clocks, gas burners, and electric cookers. A few sites have installed service delivery chalkboards to display specific PMTCT targets on child survival and family planning, and these are used to track and share progress in each service area.

Since the ARIFU project began, the proportion of NMUS officers receiving HIV testing each quarter has increased, thanks to ACU and facility leaders, from 12% in June 2010 to 48% in March 2012. Additionally, HIV care and treatment sites have been established within 16 of the 21 facilities (before ARIFU most sites did not offer ART).

Strengthening Laboratory Networks

All 34 ARIFU sites are situated within camps and training institutions for uniformed services and police personnel. Because these sites are not equipped with laboratory facilities, ARIFU (starting in January 2011) provides direct funding support for CD4 and early-infant-diagnosis (EID) sample transport and has purchased related equipment, including Vacutainers, cold boxes, and drying racks. These investments have made it easier for sites to send CD4 and dried blood spot samples to the nearest laboratory facility, leading to an increase in the number of HIV-positive clients accessing CD4 testing and an increase in the number of samples from HIV-exposed infants receiving polymerase chain reaction (PCR) testing for EID at six weeks of age (see Table 1).

Implementing Peer Counselor Support and Defaulter Tracing

In January 2012, ARIFU initiated a *mentor mother* peer support program to strengthen identification and testing of HIV-exposed infants and support improved adherence among HIV-positive pregnant and postnatal women. Mentors are HIV-positive mothers attending ARIFU-supported facilities who assist other HIV-positive mothers to disclose their status to partners and family members, adhere to treatment regimens, and have their infants tested for HIV. In November and December 2011, ARIFU recruited and trained 20 mentor mothers from 14 PMTCT facilities to provide psychosocial support to postnatal HIV-positive women. Mentors also escort HIV-positive pregnant women to clinics for ART initiation and follow-up visits. Each mentor is expected to work two to three days per week in exchange for a monthly stipend of US$50. Mentors receive their stipend upon submission of reports, which include information on support provided, challenges encountered, next steps

continued

Table 2. Mentor Mother Activities Reported at 14 ARIFU-Supported Sites

Service Provided		Total Clients Reached	
		Feb 2012	*Mar 2012*
Counseling	Assisted in post-test counseling of pregnant/postnatal women	37	105
	Assisted pregnant and postnatal women with attendance at clinic visits, support meetings, and adherence to antiretroviral and other drugs	45	83
	Assisted in HIV-status disclosure among HIV-positive pregnant and postnatal women	38	39
Treatment literacy	Health talk/treatment literacy session held for all who attend HIV clinics	50	67
	Total reached through health talk/literacy sessions	690	778
Referral and linkages	HIV-positive pregnant women linked to HIV care and treatment	14	22
	HIV-exposed and -infected infants linked to HIV testing, care, and treatment services*	19	28
	Referrals of HIV-positive pregnant and postnatal women from community to facility	12	14
Defaulter tracing	Defaulting HIV-positive pregnant and postnatal women traced	15 (65% of defaulters)	15 (83% of defaulters)
	Defaulting clients traced who came back for treatment	10 (67% of those traced)	11 (73% of those traced)

* These activities are reported as a group of services; numbers on each linked service are unavailable.

on addressing challenges, and data on services received by the supported mothers (see Table 2).

Conclusion

The ARIFU project activities described have contributed to expansion of PMTCT service delivery at the supported sites (see Table 1). Early experiences have demonstrated that rapid scale-up of comprehensive PMTCT services for a hard-to-reach population is possible through supportive supervision, capacity building, and strengthened laboratory logistics. Through its continued support to the ARIFU project, EGPAF will work to further improve the quality of PMTCT services at supported facilities.

TANZANIA:

Integrating HIV Care and Treatment and Prevention of Mother-to-Child Transmission at Reproductive and Child Health Clinics in the Shinyanga Region

Agatha Haule (ahaule@pedaids.org), Angesyege Kibona, Dafrosa Charles, Charles Edward, and Roland van de Ven

Since 2003, the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), through support from PEPFAR through USAID, has supported the Tanzania Ministry of Health and Social Welfare to scale up the national prevention of mother-to-child transmission (PMTCT) of HIV program in five regions (Arusha, Kilimanjaro, Mtwara, Shinyanga, and Tabora). By December 2011, EGPAF was supporting 1,120 reproductive and child health clinics in these regions to provide PMTCT services.

Background

Despite efforts to increase prevention of mother-to-child transmission (PMTCT) and HIV counseling and testing service coverage in Tanzania, less than half (44%) of HIV-positive pregnant women were reported to be enrolled in HIV care and treatment clinics (CTCs) in 2009.[1] Inadequate linkages between PMTCT and HIV care and treatment services, including poor tracking of referred clients and inadequate knowledge and skills related to HIV treatment among reproductive and child health (RCH) clinic staff, were believed to be contributing factors.

In October 2010, EGPAF began supporting five district hospitals in the Shinyanga Region, which had some of the lowest rates of HIV care and treatment enrollment among HIV-positive pregnant women in the country, to integrate care and treatment into RCH clinics to increase enrollment of eligible pregnant women. Program data from July through September 2010 from the five hospitals in the region indicated that of all HIV-positive pregnant women identified, 89% received antiretroviral (ARV) prophylaxis at RCH clinics, but only 27% were enrolled into HIV care and treatment services.

Training and Integration

Hospital Management Teams (HMTs) from the five hospitals developed an integration plan, which was rolled out in October 2010. EGPAF, in collaboration with the Ministry of Health and Social Welfare, supported implementation of this plan through the training of four staff members from each hospital (including two nurse midwives from RCH clinics) on clinical staging, CD4 sample collection, antiretroviral therapy (ART) prescribing and initiation, and provision of ARV refills. The clinical officers from each CTC offered technical assistance to RCH staff following the training, and a room for HIV care and treatment services was set up at each RCH clinic. Monthly site-level data and experience-sharing meetings were organized by the HMT and attended by both RCH and CTC staff to discuss progress, management of difficult cases, and service documentation.

Between October 2010 and December 2011, the proportion of HIV-positive pregnant women enrolled in HIV care at the five hospitals increased from 31% to 73%, and the proportion of women on ART rose from 8% to 21% (see Figure 8 on page 25).

Lessons Learned

HIV-positive women have reported feeling more comfortable accessing HIV services at RCH since the plan was implemented; possibly because offering myriad services at one visit is more time efficient and/or integration of HIV services into other health services may limit potential impact of stigma on care-seeking behavior. Commitment of hospital authorities has played an important role in the success of this

» *continued on pg. 25*

UGANDA:

Setting the Stage for Family Planning–HIV Integration: Gaps, Challenges, and Opportunities at Ruhoko Health Center

Eliab Kajungu (ekajungu@pedaids.org), Jacqueline Nassimbwa, Mary Namubiru, and Edward Bitarakwate

The Elizabeth Glaser Pediatric AIDS Foundation–Uganda program has been operational since 2000. The program currently supports 188 health facilities offering prevention of mother-to-child HIV transmission (PMTCT) services that have reached more than 2.2 million women since the program's inception (as of December 31, 2011).

Background

The Global Plan includes targets for reducing the unmet need for family planning among HIV-positive women.[1] Modeled projections published in 2009 estimated that unwanted pregnancies among HIV-positive women in Uganda accounted for 25% of pediatric HIV infections and 20% of pediatric AIDS–related deaths nationally, suggesting that greater access to family planning services could substantially contribute to reducing mother-to-child HIV transmission.[2] However, the unmet need for family planning among the general population in Uganda remains high: 40% of women expressing a desire for family planning methods were unable to access them in 2011.[3] The percentage of women living with HIV with an unmet need for family planning was estimated to be 32% in 2010.[4]

Family Planning/HIV Integration in South-West Uganda

The Strengthening TB and HIV Response in South-West Uganda (STAR-SW) Project, an EGPAF-supported project funded by PEPFAR through the United States Agency for International Development (USAID), aims to increase access to and utilization of quality comprehensive HIV/TB prevention, care, and treatment services within district health facilities and their communities. One of the major challenges the STAR-SW project has faced is the poor utilization of family planning. The Ministry of Health's (MOH's) new plan for the elimination of mother-to-child transmission (MTCT) of HIV—launched on December 1, 2011—includes a target of increasing utilization of family planning services to 80% of all women living with HIV and their partners through integration of HIV and family planning services.[5]

STAR-SW selected Ruhoko Health Center IV (HCIV), a high-volume health center located in the Ibanda District, to pilot integration of HIV and family planning into maternal and child health (MCH) services. In collaboration with the Global Health Corps' Fellows Program, STAR-SW conducted a situation analysis of family planning and HIV service integration in MCH at Ruhoko HCIV in 2011.

The analysis revealed that family planning services were provided to all clients through the outpatient department and those attending the MCH department. Family planning outreach services were provided by Marie Stopes International (MSI), an international nongovernmental organization. While all family planning methods were provided at the facility, frequent stock-outs of commodities were reported. The analysis also found that health workers in the MCH clinic lacked the skills to apply intrauterine devices (IUDs) and other long-term birth control methods, despite the fact that approximately 75% of the facility's clients chose long-term methods.

Results of the analysis informed the design of the integration of family planning into ante- and postnatal care at Ruhoko. Implementation support provided by STAR-SW included on-site training and mentoring of health-care workers in family planning, provision of job aides, and ordering of family planning supplies

Strengthening Cameroon's Monitoring and Evaluation System to Support Progress in Elimination of Mother-to-Child HIV Transmission

Patrice Tchendjou (ttpatty@yahoo.com), EGPAF Consultant

Starting in November 2011 and with support from the United Nations Children's Fund (UNICEF), EGPAF has been contributing to the development of Cameroon's national monitoring and evaluation (M&E) plan for MTCT elimination. These efforts have included identification of key indicators critical for measuring progress toward elimination of pediatric HIV as well as alignment of the national M&E system with Cameroon's revised national PMTCT guidelines (which follow 2010 WHO PMTCT Option A).

To date, EGPAF has facilitated the analysis of existing PMTCT indicators and integration of PMTCT and maternal, neonatal, and child health (MNCH) indicators on reporting forms to be used by service providers at health facilities and district medical offices. The resulting revised national M&E tools are currently being piloted at seven health facilities. Once these tools are finalized, EGPAF will conduct training of national trainers on the use of the revised reporting tools before roll-out of a national training for PMTCT service providers. EGPAF looks forward to continuing to contribute toward the development and implementation of Cameroon's plan for the elimination of pediatric HIV through strengthening the country's M&E system and disseminating and implementing revised M&E tools focused on improving performance of PMTCT and MNCH service provision.

Dr. Tchendjou has been representing EGPAF in Cameroon as a member of the PMTCT Alliance for Elimination of MTCT (EMTCT). The Alliance is currently finalizing the Cameroon national plan for EMTCT, a process that EGPAF has supported through a recent gap analysis highlighting disparities and weak linkages between PMTCT and MNCH programs in Cameroon. Findings of the analysis were also used to inform the cost analysis of the national plan for elimination of pediatric HIV and monitoring and evaluation of the plan's implementation.

from the national supply chain system. Between February 2011 and March 2012, 80% of all HIV-positive women attending postnatal care at Ruhoko—those diagnosed HIV-positive postnatally and those with known HIV-positive status upon entry into postnatal care—received family planning services.

Next Steps

STAR-SW has initiated a partnership with MSI to further build the capacity of health workers in the MCH Department at Ruhoko HCIV to provide long-term family planning methods through training and supportive supervision, strengthening of supply chain management to avoid stock-outs, and harmonizing of MSI family planning camps with the site's HIV care/antiretroviral (ART) clinic community days. The STAR-SW project is finalizing plans to expand provision of family planning services at the facility by supporting provision of contraceptives to all mothers visiting the immunization clinic and psychosocial support groups. STAR-SW has also finalized the printing of an MOH-approved integrated family planning register, which combines client information from outpatient services, postnatal care, the HIV clinic, and family planning. The integrated family planning register will capture the HIV status of individuals receiving family planning services irrespective of service delivery points at the facility. Scale-up of this strategy to other facilities is being explored to ensure all HIV-positive have access to family planning services.

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MALAWI:

Quality Improvement Approaches Support Prevention of Mother-to-Child Transmission Service Provision in Two Hospitals in Lilongwe

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A nurse ensures that the infant ARV prophylaxis indicator is recorded in the register as part of a QI initiative.

The Elizabeth Glaser Pediatric AIDS Foundation established an office in Malawi in 2008 and is currently supporting prevention of mother-to-child transmission of HIV services in 97 hospitals and primary health services facilities in three districts. These services have reached more than 550,000 women (as of December 31, 2011).

Background

In late 2010, the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) secured funding from PEPFAR through the U.S. Agency for International Development (USAID) to support two hospitals (Dae Yang Luke and Nkhoma). EGPAF selected these hospitals for implementation of quality improvement (QI) activities in response to reported low uptake of maternal antiretroviral (ARV) prophylaxis and therapy (ART). Support was aimed at strengthening prevention of mother-to-child HIV transmission (PMTCT) service delivery in the two facilities. Between January and March 2011, EGPAF introduced QI approaches to improve data collection and analysis, which was expected to lead to better informed decisions on needed improvements to PMTCT service delivery.

Quality Improvement Activities

Training on the national PMTCT guidelines and QI strategies was provided by EGPAF staff to health-care workers in the antenatal care (ANC) and maternity wards at both facilities. Following this training, EGPAF Malawi developed a PMTCT QI tool to assess quality of care provision at ANC and maternity wards using key PMTCT indicators from the national PMTCT monitoring and evaluation tools. The tool was designed to collect QI data from client registers in ANC and maternity wards, which could then be reviewed by hospital staff to assess the services delivered and compare them to those recommended by the national guidelines.

With support from facility managers, EGPAF performed monthly mentorship to ANC and maternity health-care workers on ensuring consistent data recording and quality data reporting . During these visits, facility managers, nurses, HIV care and treatment counselors, and laboratory technicians servicing the ANC and maternity wards were supported by EGPAF to identify problems and implement improvements to address gaps. Individuals or departments were assigned responsibility for implementing improvement interventions by facility managers. The improvement plans were reviewed monthly by EGPAF staff and the facility manager to monitor progress in service delivery and documentation.

Results

During the first four months of mentorship activities, problems around weak documentation were evident in both the ANC and maternity registers (e.g., incomplete data in registers and data documentation errors). Mentorship focused on supporting hospital staff to complete registers properly. Gaps identified included poor use of WHO clinical staging and CD4 testing as well as low provision of ARVs to pregnant women for prophylaxis and treatment. By focusing on recording of services and addressing identified gaps, staff improved documentation of service provision markedly between the first (January–March) and third (July–September) quarters of 2011(during which time no changes were made to PMTCT regimens or guidelines). Notable improvements included:[1]

- The proportion of HIV-positive women documented to have received ARVs (for treatment or prophylaxis) increased from 38% to 95%.
- The proportion of HIV-exposed infants documented to have received ARV prophylaxis increased from 86% to 92%.
- All of the registers reviewed by EGPAF mentors were complete, compared to before the intervention when incomplete registers was identified as a major challenge.

Conclusion

The level of documentation of service delivery was poor at the outset of QI activities, limiting the ability to assess whether QI activities led to actual increases in service uptake. However, the quality of documentation for key PMTCT indicators improved dramatically, due in large part to the strong leadership of health facility managers. Introduction of the QI tool motivated facility staff to enter complete service delivery data, which led to identification of gaps and implementation of needed changes. This experience has shown that QI methods are can be particularly useful in addressing weaknesses in data recording to ensure program performance is accurately assessed.

Reference

1 GLASER Database. Washington, DC: The Elizabeth Glaser Pediatric AIDS Foundation. Accessed May 17, 2012.

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Tanzania: Integrating HIV Care and Treatment and Prevention of Mother-to-Child Transmission at Reproductive and Child Health Clinics in the Shinyanga Region

integration effort. Experience sharing and colleague encouragement through organized sharing meetings has helped to address challenges associated with the integration process.

EGPAF will use lessons learned to improve linkages in all supported regions of Tanzania, enabling the country to reach its national target of providing 40% of all HIV-positive pregnant women with ART by 2015. Further analysis is underway to determine the quality of care and treatment services provided in RCH clinics.

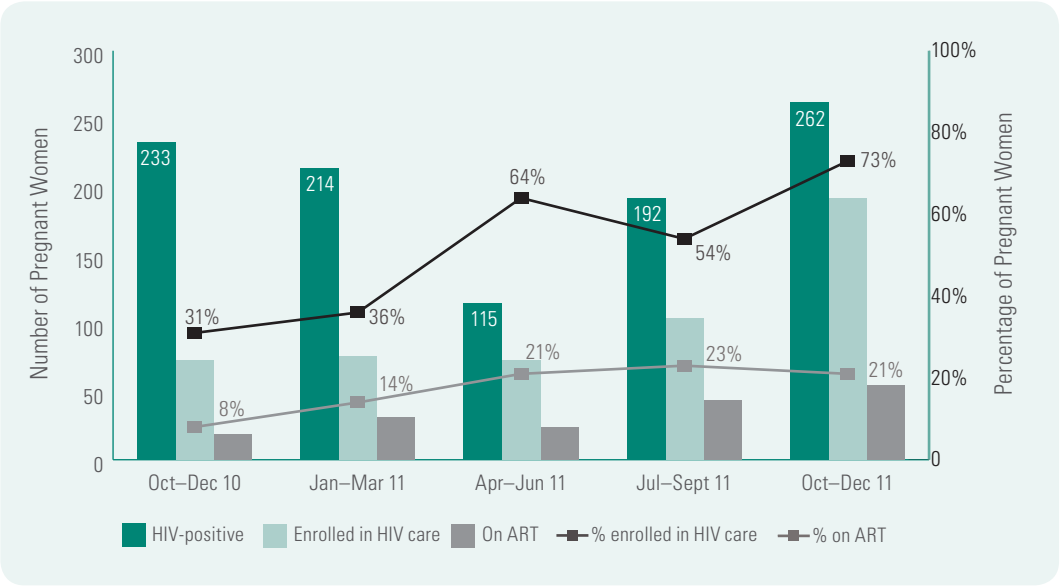

Figure 8. Delivery of HIV care and treatment services among HIV-positive pregnant women enrolled at five hospitals in Shinyanga Region (October 2010 through December 2011)

Source: GLASER Database. Washington, DC: Elizabeth Glaser Pediatric AIDS Foundation. Accessed May 16, 2012.

Kenya: Quality Improvement Methods Help Identify Gaps and Opportunities

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In October 2010, EGPAF's Kenya program implemented the Pamoja Project in the Nyanza Region, with PEPFAR funding through the Centers for Disease Control and Prevention. The project supports 154 sites of varying volume (from community dispensaries to district hospitals) to deliver PMTCT and pediatric and adult HIV care and treatment services. To assess quality of care and implementation of new PMTCT guidelines rolled out nationally in 2010, Pamoja staff analyzed performance of key indicators at a high-volume district hospital and five lower-level health facilities in Nyanza Province in 2011. The results of these analyses informed QI activities to strengthen documentation of services and address gaps in provision of services in these EGPAF-supported sites.

Activities at Ndhiwa District Hospital

EGPAF, with Kenya's Ministry of Health (MOH), supported the district's health management team (DHMT) to perform a data quality audit (DQA) at the Ndhiwa District Hospital in Nyanza Province. Forty-one patient records were reviewed through random sampling of 100 pregnant women attending the antenatal care (ANC) clinic from January to September 2011. The hospital's HIV-exposed infant register and dried blood spot HIV test registers were also reviewed.

A meeting, including staff from the hospital's nursing, clinical medicine, pharmacy, and records departments, was convened by the DHMT and EGPAF to discuss the DQA findings. The discussion revealed inconsistency in staff recording of services provided as well as challenges related to laboratory-based CD4 testing hours (CD4 testing was only performed before 11:00 a.m. each day). The District STI (sexually transmitted infection) and AIDS Coordinator (DASCO) was responsible for ensuring that an improvement plan to address these weaknesses was implemented. EGPAF and DASCO mentored ANC staff on PMTCT guidelines, health providers were assigned a time slot each week to update registers and patient files to ensure consistency, and CD4 testing was extended to clinic operating hours (8 a.m. to 5 p.m. daily). A follow-up assessment was performed in March 2011 during which 49 patient records were reviewed using the same sampling method (see Figure 9).

Activities at Lower-Level Facilities

In November 2011, 130 maternal and infant ANC and postnatal records of HIV-positive women attending five EGPAF-supported lower-level health facilities in Nyanza from January to June 2011 were randomly selected for analysis. Data collected were entered into an EZQI tool (an Excel-based tool) by Pamoja staff and reviewed. Aggregate findings revealed gaps in documentation as well as performance.

EGPAF discussed performance with facility staff, the DASCO, and other district representatives during feedback sessions. Discussions revealed that staff were not confident in WHO staging. They also expressed a poor understanding of the importance of following up with HIV-exposed infants. Documentation of services provided was not always completed. Using a technique known as a fishbone analysis,* the teams discussed the potential causes of the gaps identified (see Figure 10). Improvement efforts included reducing data recording errors and gaps through implementation

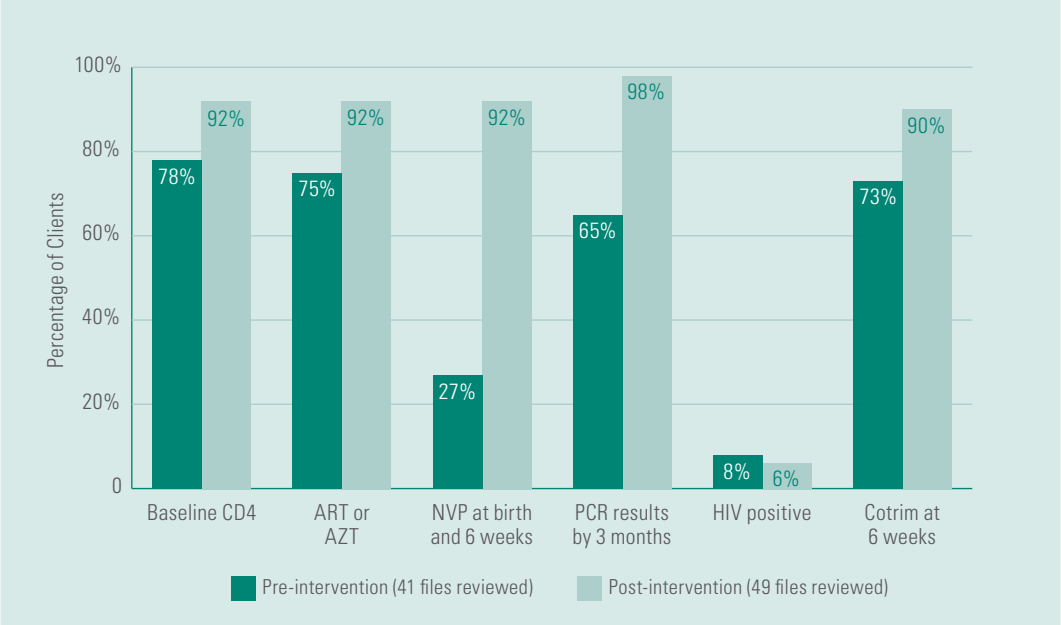

Figure 9. Reported service delivery pre- (November 2011) and post- (March 2012) QI intervention at Ndhiwa Hospital

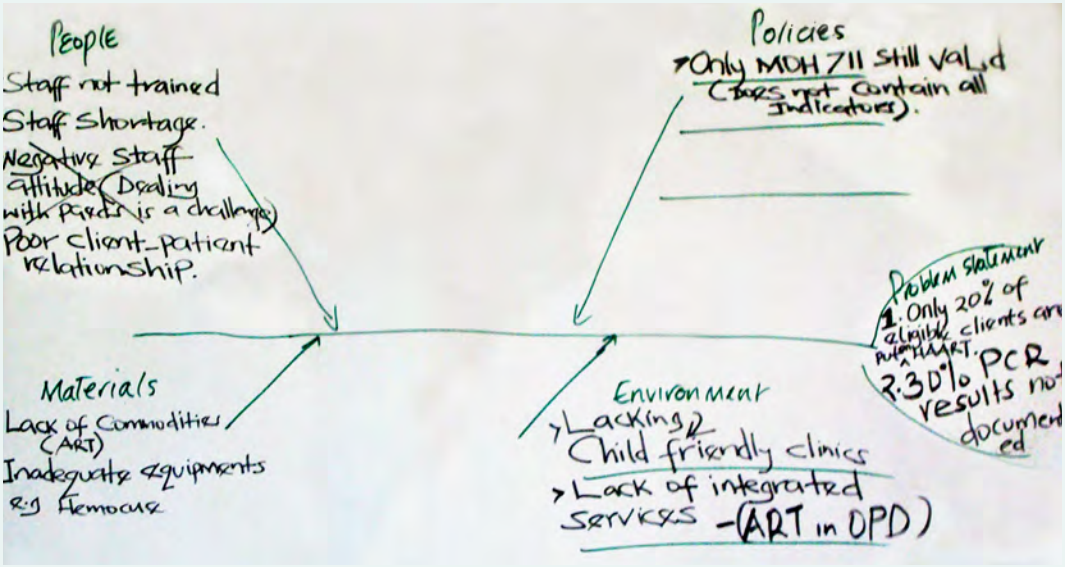

Figure 10. Fishbone analysis performed by facility staff to determine the root cause of an identified challenge

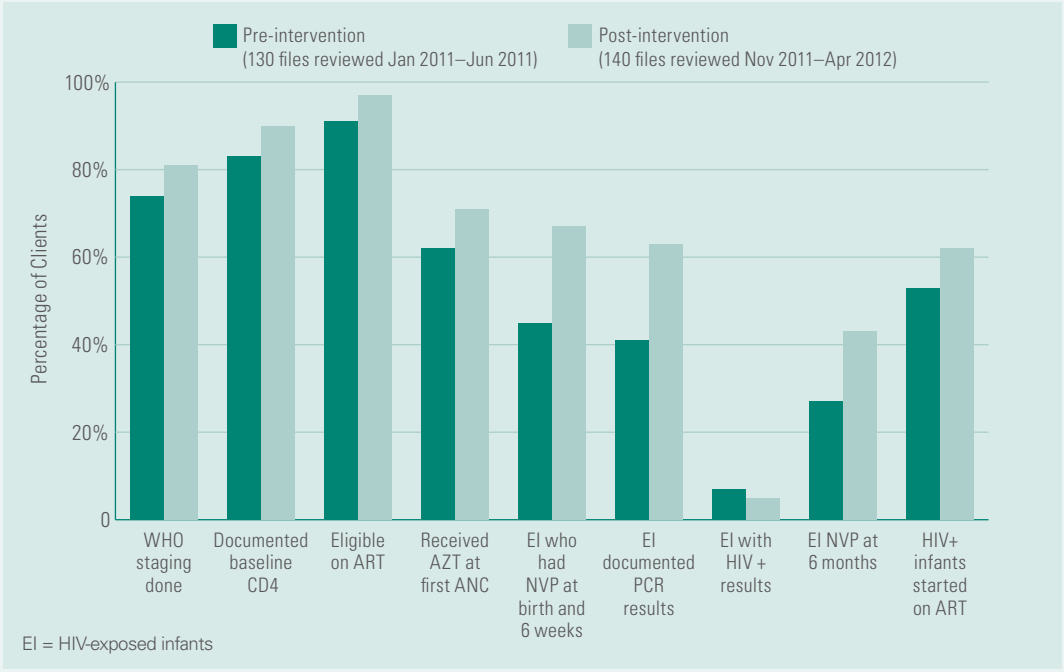

Figure 11. PMTCT indicators at five rural Pamoja-supported health facilities in Nyanza before and after the QI intervention

of new systems to update the HIV-exposed infant register and HIV-exposed infant cards concurrently, training and mentoring clinic staff on WHO staging, hiring of peer counselors to follow up on HIV-exposed infants, provision of PMTCT job aides to each site, and sensitization of surrounding communities on PMTCT and pediatric care by health officers attending community meetings.

Five months later a follow-up assessment was performed, involving a review of 140 records of clients who had attended the clinic from November 2011 through April 2012. Improvements were observed in all indicators (see Figure 11).

Conclusion

Using assessments of facility performance data to highlight possible gaps in data collection and service delivery led to improved reporting practices. Further investigation is needed to determine whether the observed increases in services were the result of improved reporting, enhanced service delivery, or a combination of factors. EGPAF's collaboration with sites, community health teams, and the MOH was instrumental to the success of this QI initiative. EGPAF will continue to work with these partners to further improve the performance of Pamoja-supported facilities.

*Fishbone diagrams identify many possible causes for an effect or problem.

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Swaziland: Planning for Impact: Development of a National Strategic Framework for Elimination of Pediatric HIV

Based on the findings of the gap analysis, a number of strategies and actions were included in the plan to address identified bottlenecks in PMTCT service delivery, including:

- expanding access to quality comprehensive PMTCT care at all ANC facilities;
- integrating PMTCT interventions into the maternal neonatal and child health platform;
- integrating the supply chain system to ensure efficient stock of all site supplies (HIV and otherwise); and
- capacity building of civil society organizations to deliver a continuum of HIV prevention, treatment, care, and support services at the community level.

The strategies were then categorized according to the four prongs of PMTCT as outlined in the Global Plan. Outputs and related indicators were developed for each of the four strategies, with the overall objective to reduce MTCT to less than 5% by 2015. Following the development of the National Framework, the committee subsequently developed cost and operational plans for EMTCT by 2015. The overall plan details all activities to be carried out under each prong together with identified time frames, implementation partners, and cost.

Next Steps

The National Elimination Strategic Framework and National Operational Plan have been finalized and the MOHSW will be officially launching the Framework document in the near future. However, some of the activities in the plan have already been implemented by the MOHSW, EGPAF, and other implementing partners. EGPAF will continue to work with the MOHSW in support of its mission to eliminate pediatric HIV in Swaziland through the EPAS project.

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Rwanda: The Power of Leadership Engagement

four prongs of PMTCT. In mid-November 2011, the RBC and TWG finalized a comprehensive equity-focused strategic analysis of the PMTCT program. Data were collected and analyzed from charts and routine reports, literature reviews (of national strategies, policies, and reports) were conducted, and several meetings involving the TWG, RBC, and the Maternal and Child Health Division of the MOH were held to discuss findings and provide recommendations. In December 2011, in a two-day workshop attended by participants from RBC, TWG, district health facilities, and partners, findings of the PMTCT assessment were discussed and a draft EMTCT plan was presented. Rwanda's national strategic plan for elimination of pediatric HIV was finalized in January 2012 and is currently being validated by the MOH.

In May 2012, the HIV/AIDS division within the RBC developed and presented a concept note for the development of district-level elimination-of-pediatric-HIV plans spanning the 30 districts of Rwanda. A roll-out plan was discussed and operations are set to start in July 2012.

EGPAF, as an active member of the TWG, provided technical assistance throughout this process and will continue to contribute to the country's drive toward EMTCT by supporting the development of district elimination-of-pediatric-HIV plans in the eastern province of Rwanda. The campaign toward EMTCT in Rwanda has been characterized by extensive participation and input from various stakeholders to develop a shared vision and plan as well as an accompanying systematic execution of that plan. Top-level government support has been instrumental in these accomplishments to date and will continue to play a key role moving forward.

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Lesotho: Assessing Resource Requirements: Costing the National Strategic Plan for Elimination of Mother-to-Child Transmission of HIV

Figure 7 shows a breakdown of costs by type of expenditure, with the highest proportion of costs coming from the procurement of materials such as emergency and obstetric care equipment, vehicles, construction of waiting mothers' homes and regional hospice care centers, renovation of adolescent corners, and infrastructure improvements to accommodate integrated ANC services. Together, these costs total roughly US$50 million over five years.

The procurement of ARVs accounts for 7% of the plan's total budget, which reinforces the notion that eliminating pediatric HIV requires a variety of activities beyond the provision of ARVs. The current approach to EMTCT focuses on providing a comprehensive package for all pregnant women and women of reproductive age. In the course of developing a national strategic plan for EMTCT and pediatric HIV care, the country took the opportunity to look at opportunities to integrate and link a number of crosscutting activities intended to effect more efficient and effective service delivery once the plan is fully implemented.

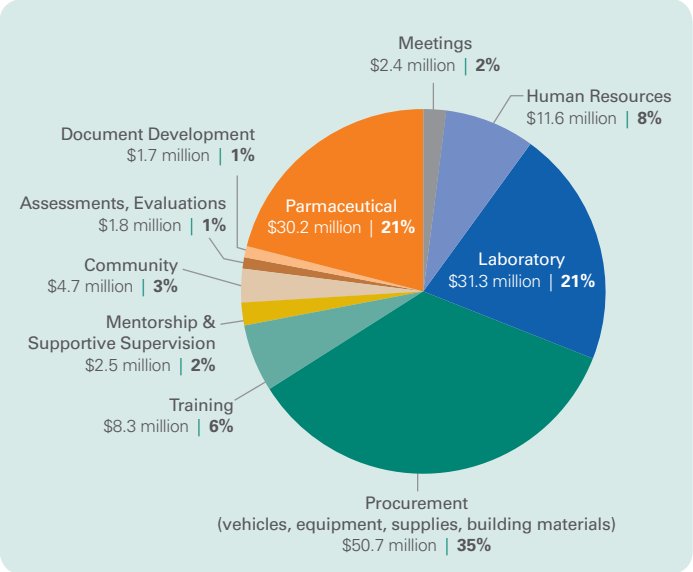

Figure 7. Breakdown of total costs for plan implementation by type of expenditure (in USD)

Note: Costs included under Community were restricted to stand-alone activities such as community gatherings, radio messages, or development of communication materials for specific campaigns and do not include community activities conducted as part of broader initiatives.

Next Steps

Following the costing activity, EGPAF will support the MOHSW by performing a financial gap analysis to determine the financial resources available within Lesotho that can be committed to achievement of the national EMTCT plan. Once the gap analysis is completed, periodic follow-up analyses will be performed during the plan's implementation to compare projected costs to actual expenses. Such analyses will measure return on investment and help ensure efficient use of resources.

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Zimbabwe: Using Innovative Approaches for Rapid National Scale-Up of Prevention of Mother-to-Child Transmission Services

Approximately 36,760 (84%) HIV-positive women and 24,696 (56%) HIV-exposed infants identified were initiated on antiretroviral (ARV) prophylaxis in 2011. The number of treatment-eligible pregnant women receiving ART in ANC clinics more than doubled in one year, increasing from 2,498 (17%) in 2010 to 5,890 (37%) in 2011.

In 2012, EGPAF's Zimbabwe program expanded its support to an additional 10 PMTCT facilities (for a total of 1,354). In the first quarter of 2012, the trend of improved uptake of PMTCT services was sustained, with 65% of treatment-eligible pregnant women initiated on ART and 89% of HIV-positive pregnant women provided with ARV prophylaxis in line with the 2010 guidelines at supported facilities. Initiation of HIV-exposed infants on ARV prophylaxis has also increased with 80% of HIV-exposed infants receiving ARV prophylaxis during the quarter.

Next Steps

An additional 104 POC CD4 analyzers are awaiting deployment at sites throughout the country. Meanwhile, EGPAF continues to work to address challenges to ART initiation by advocating for donors and other partners to support the procurement of CD4 reagents to supplement those supplied by EGPAF. An assessment will be conducted from June through September 2012 to determine the impact of POC CD4 roll-out on CD4 testing uptake and ART enrollment among pregnant women.

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Piloting the Use of an Electronic Database to Track Patient-Level Longitudinal Service Uptake

Electronic databases are vital tools in public health service delivery that support improved accuracy and timeliness of program data and strengthened data collection practices. In September 2011, EGPAF Zimbabwe began piloting an electronic database (EDB) to capture longitudinal data on mothers and infants enrolled in PMTCT. The pilot is being implemented in five district hospitals selected for geographical representation of the country in collaboration with the MOHCW. EGPAF has recruited, trained, and deployed data clerks at each hospital to enter data from the paper-based registers.

Data collected from January through March 2012 have already begun to demonstrate the value of an EDB and highlight the importance of monitoring longitudinal patient data for selected programs. Just 7% of HIV-positive pregnant women at the five hospitals had enrolled in ANC by 14 weeks gestation and 36% presented for their first ANC visit during their last trimester, highlighting the critical challenges inherent in providing comprehensive PMTCT coverage starting in early pregnancy. Perhaps even more challenging, women must be retained in ANC, as indicated by the low rate (52%) of second ANC visits. Going forward, ensuring earlier service uptake and longitudinal adherence and retention will be prioritized as part of EGPAF Zimbabwe's ongoing efforts to support PMTCT program optimization.

Briefly Noted…

Piloting an Antenatal Care Longitudinal Register in Kenya for Improved Monitoring of Reproductive Health and HIV Outcomes

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Kenya adopted Option A of the WHO 2010 revised PMTCT guidelines, which recommend initiation of HIV-positive pregnant women on antiretroviral therapy (ART) or prophylaxis as early as 14 weeks of gestation and completion of four antenatal care (ANC) visits during pregnancy. However, the current recording system at ANC facilities in Kenya makes it difficult for health-care workers to longitudinally track health information through the four ANC visits. Kenya's Ministry of Health (MOH), together with implementing partners, addressed this challenge by piloting a revised ANC register in 22 facilities in two provinces between November 2011 and April 2012.

In March 2011, a subcommittee of Kenya's PMTCT Technical Working Group developed a longitudinal register and tally sheet for health-care worker use that captures client information and services offered at each visit, from prenatal care until breastfeeding cessation. The register and tally sheets were approved for piloting by the MOH in November 2011. Sixty-one health-care workers from the 22 facilities were trained by the MOH on the use of these tools in October 2011. Feedback on the tools had been collected by the national monitoring and evaluation team in the piloting phase. The Elizabeth Glaser Pediatric AIDS Foundation provided two supportive supervision visits (six months apart) to each of the pilot facilities following this training.

As of December 2011, all 22 facilities were using the new recording tools. Preliminary feedback from facility staff indicates that despite increased workload, health-care workers appreciate the ease in referencing a client's health history on one page of a client file. Access to longitudinal individual health information allows workers to quickly identify needed services, including repeat HIV testing, linkages to psychosocial support, and client follow-up due to missed ANC visits. Further evaluation of this pilot is underway and, due to initial positive feedback, nationwide roll-out of these tools by MOH is expected by September 2012 after the review of cohort outcomes.

Integrating Prevention of Mother-to-Child HIV Transmission, Maternal, Neonatal, and Child Health, and Pediatric HIV Services in Lesotho

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In 2008, Lesotho's Ministry of Health and Social Welfare (MOHSW) prioritized the integration of prevention of mother-to-child transmission (PMTCT) of HIV into maternal, neonatal, and child health (MNCH) clinics. The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) and UNICEF partnered with the MOHSW in 2008 to implement these integrated services. Prior to integration, pregnant women were tested for HIV in MNCH clinics but HIV-positive women had to be referred to an antiretroviral therapy (ART) clinic for treatment. "Under-five" pediatric clinics offered only immunization and growth monitoring services, and oftentimes they neglected to address any issues related to HIV infection in children. Pediatric ART could only be prescribed by physicians and was only offered at hospitals.

The integration strategy, developed by the MOHSW with implementation partner support, includes group counseling for pregnant women and their partners upon their first visit to the MNCH clinic, followed by voluntary HIV testing and counseling. A "Family Book" strategy was developed to keep track of the care of the HIV-infected woman, her partner, and her children. The book is kept at the MNCH unit, filled in by a nurse, and later used by tracking staff to ensure retention in care. All women are given the minimum package (containing a month's supply of ARVs, cotrimoxazole, and vitamin supplements) at the first MNCH visit. Women who are not HIV-positive are provided with a package containing vitamins, iron, and folic acid, which they are to take throughout their pregnancy. Women eligible for ART are initiated on treatment at MNCH facilities by nurses, and those who are in need of prophylaxis are given zidovudine (AZT) starting at 14 weeks of gestation.

EGPAF contributed to the development of the strategy for integration through active participation in the MOHSW's Technical Working Group for HIV services. Financial and technical support for training of health workers was also provided by EGPAF and partners.

Integration of MNCH and HIV services has improved the quality of care offered to mothers and their babies in Lesotho and also improved early enrollment of pregnant women and children into HIV care and treatment.

Q&A with…

Mary Pat Kieffer

Mary Pat Kieffer is the director of the Technical Leadership Development Unit at the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF). Based in Maputo, Mozambique, she works with EGPAF staff around the world to build technical capacity and provide technical support, leadership, and representation focused on bringing countries closer to elimination of pediatric HIV. Prior to joining EGPAF, Kieffer worked for more than five years for USAID/East Africa, where she held multiple positions providing technical leadership in the region and internationally on HIV prevention, care, and treatment. She also has served as a member of the Steering Committee of the African Network for Care of Children Affected by HIV/AIDS (ANECCA) since 2003.

How has your role allowed you to support progress on the development of pediatric HIV elimination plans in EGPAF-supported countries?

My position gives me a view into the ongoing global discussions in this area and enables me to work with individual country teams on bringing global thinking into country elimination plans. It also enables me to inform global efforts by addressing the realities on the ground while applying innovations and lessons learned from within and outside EGPAF.

What do you enjoy most about your work in this area?

I am able to work in many different countries with teams that include EGPAF staff, ministries of health, and other stakeholders to work through issues and reach consensus on next steps for the countries we support. Developing the country plans involves a thorough analysis of a country's current situation—its rates of mother-to-child transmission, prevention of mother-to-child transmission coverage level, funding landscape, and overall commitment to elimination of pediatric HIV—and a very pragmatic understanding of how global goals can translate into country actions.

What do you see as the main challenges in translating this support into real progress on the ground?

All of the country plans to eliminate MTCT that EGPAF has supported are ambitious and by necessity cover a broad range of interventions that require new funding and new partnerships. Reaching the targets in these plans will require a wide range of intense efforts to address issues such as human resource challenges, poor adherence, and loss to follow-up among pregnant women as well as weaknesses in data monitoring systems.

If you had five minutes with global health leadership bodies, what specifically would you advocate for related to elimination of pediatric HIV?

The Global Plan has put forward a clear and comprehensive vision for reaching elimination of pediatric HIV. My plea to everyone, at every level, is *let us not sidestep the difficult issues and look for shortcuts. There are no shortcuts, and no easy and simple solutions.* We could each recite the list of challenges to good health programming. The work going on now to achieve elimination of MTCT provides all of us with an opportunity to look at new ways to invest our resources and energies to make some fundamental changes to how health systems provide HIV and maternal and child health services.

What is the most universally challenging aspect of elimination of MTCT and how do you think EGPAF can help address it?

It is difficult to name one aspect that trumps all others, but the human resource and health systems challenges come close. These are things that cannot be solved by simply providing technical assistance at a facility. What will it take for public employees to earn good salaries so that they stay in the public sector? How can we change the management of the health system so those who are providing good-quality care are recognized and rewarded? Can the preservice training institutions change enough to provide up-to-date content that would give graduates the skills that they need? How will we build systems that are accountable to the public for the services that we deliver? Can we build efficient health systems so that providers are able to manage the chronic diseases of clients?

EGPAF can't address all of these, but we can help to break these large issues into more manageable pieces and address them piece by piece. Some of the examples in this *Haba Na Haba* show how our country programs are helping ministries of health to do this.

Can you share any particular examples of innovative approaches you have seen during the early stages of country planning around elimination of MTCT?

There are so many examples of innovations developed by countries as they address the challenges inherent in bringing pediatric HIV to an end, and some of these can be found in this issue of *Haba Na Haba*. One of my favorites not included here is from Swaziland, where the Deputy Director for Public Health asked that the national PMTCT guidelines be revised in the context of elimination of MTCT and strengthening MCH services. The new Swaziland guidelines are structured from the provider perspective, giving clear and complete information on all services for pregnant women and their infants. The team spent time thinking through each visit and defined essential actions for providers at each client encounter. In this way, they brought in all four prongs of PMTCT and created a robust plan that links to other guidelines and services. This made it much easier to build a broad-based working group for elimination of MTCT and to develop a strong national plan.

How do you see the relationship between EGPAF's focus on elimination of pediatric HIV and its engagement on broader issues around health systems strengthening?

We don't talk enough about EGPAF's work towards strengthening health systems, even though this is central to our work approach. We have generated a lot of great experience and strong results, and we use that to inform our efforts towards elimination of pediatric HIV.

It will be impossible to achieve elimination of pediatric HIV without strengthening health systems. The challenge lies in how funding for these two areas is structured, as funding for health systems is often separate and supports more general approaches to strengthening management and functioning of these systems. From my perspective, health systems strengthening should be directed toward the achievement of specific health goals, such as improving health of mothers and children, in order to address the myriad bottlenecks that prevent the right service from being delivered to the right individual at the right time. Recognizing the health systems barriers to elimination of pediatric HIV is an opportunity to build consensus and movement on larger health system weaknesses.

Do you have a professional hero, and if so, how has that person inspired you?

There are so many amazing professionals that I have had the opportunity to know and work with—in our country teams, in the various MOH teams, and globally. But the person who I can say has made the biggest impact on me personally was the late Jonathan Mann, the first head of WHO's Global Program on AIDS back in the 1980s. I worked closely with this visionary leader for six years when he came to Harvard, and he taught me a tremendous amount about life and public health. However, the most important thing that I learned from him was how to see the possibilities and potential, how to develop those into a vision, and to be brave enough to take the necessary steps to move towards that vision.

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