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# **Review of Early Infant Diagnosis of HIV in Sierra Leone**

By Dr Louisa Ganda, ATM

#### Introduction

Sierra Leone has an estimated population of 5.8 million with a national HIV prevalence of 1.5%. The HIV prevalence among pregnant women

attending antenatal clinics is 3.2%. Mother-tochild transmission of HIV is the most important source of HIV infections in children. About 3,300 infants are born to HIV-positive women annually. Without interventions, 1,200 of these infants will be infected (assuming 35% transmission rate) and one third of them will die by their first birthday and half by their second birthday.

Early infant diagnosis of HIV (EID) is critical for timely initiation of treatment. Until recently, human resource capacity in this area was lacking. Through partnership with WHO, CDC and UNICEF, resources were mobilized to support establishment of a Central Public Health Reference Laboratory (CPHRL) where diagnosis of HIV in infants will be undertaken by DNA polymerase Chain Reaction using dried blood spots (DBS). Five DBS sample collection sites were established in July 2011 in four public health facilities (Ola During Children's hospital, Rokupa, Makeni and Kailahun Government Hospitals) and a non-government facility in Freetown (Marie Stopes Clinic).

The National HIV/AIDS Control Programme, Ministry of Health and Sanitations (MoHS), reviewed early implementation of EID with the objectives of describing the system for the delivery of EID services; continuum of care for HIV exposed and infected children; data management; supervision and follow up as well as the sample transportation. This paper summarises the methodology, major findings and recommendations<sup>1</sup>.

#### Methodology

The process included review of documents on EID services and interviews with stakeholders including the expanded technical working group (ETWG) on HIV and pilot sites staffs.

<sup>&</sup>lt;sup>1</sup> Prepared based on the report of the joint consultative review of the implementation of Early Infant Diagnosis of HIV by the Ministry of Health and Sanitation, National AIDS Control Programme and partners in February 2012

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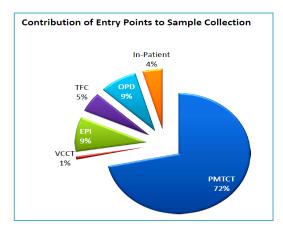
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#### Findings

Coordination and Management: The functions of existing coordinating bodies including the Top Management Team (TMT) and the ETWG were overseeing the implementation of EID. An ad-hoc task force chaired by the National HIV/AIDS Control Programme (NACP) manager with members from UNICEF, CDC-Atlanta, USA and WHO was set up to specifically coordinate EID pilot project. Managerial support from NACP and Directorate of Disease Prevention and Control were also provided. Major constraints included weak linkages and integration compounded by unclear description of roles and responsibilities for EID services at NACP, weak ownership by the District Health Management Teams (DHMTs) and limited participation of the private sector.

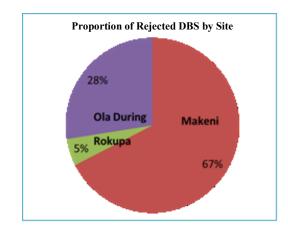
Logistics & Supply Chain Management: Prior to implementation of the pilot, all supplies and consumables were prepositioned in all sites following an effective planning, forecasting, timely procurement and distribution. The laboratory consumables for the tests have been procured by partner organizations (CDC and UNICEF) with WHO providing mainly technical support. There was minimal involvement of the MoHS Procurement Unit and the National AIDS Commission (NAC) which procures all HIV and AIDS related logistics and supplies for NACP. There was no government budget allocation for procurement of EID consumables. Data Management, Monitoring and **Evaluation:** Data collection tools (registers and forms) were completed and submitted to the national level with specimens. The epidemiological information and the lab results were compiled in a database at national level which subsequently was analyzed and information made available for action. The main constraints included limited supervisory support, irregular feedback and absence of standardization of registers and sample/case referral forms as well as inadequate documentation on follow-up home visits.

*Service Delivery Work Flow*: The entry points identified for collection of samples included the Expanded Programme on Immunization (EPI), Out-Patient Department, In-Patient Department, PMTCT, Therapeutic Feeding Centres (TFC), Voluntary Confidential Counselling and Testing (VCCT) sites.



Sample collection was mainly conducted by HIV Counsellors who received referred cases from all entry points.

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Three pilot sites (Ola During Children's Hospital in the Western Area, Makeni and Kailahun Government Hospitals) had on-site facilities to provide antiretroviral therapy (ART) to children. In Western Area only one facility (Ola During Children's Hospital) provides ART services for children. The records at one of the sites indicate that all infants testing HIV positive were initiated on treatment. Two other sites had one positive case each and both were put on treatment. One non-ART site referred all the HIV positive cases to the ART site, their records at the referring facility did not indicate the outcomes as there was no mechanism for feedback. The collaboration among healthcare staff in the hospital was minimal in ensuring continuum of care for children living with HIV as the task was left to the HIV Counsellor alone.

There was no evidence of documentation on follow-up of HIV negative children and linkage with PMTCT and other entry points.

#### Recommendations

The reviewers made the following recommendations to successfully roll out EID in the country.

- Strengthen coordination and management at all levels to optimize the implementation of EID for HIV services.
- Enhance the functionality of the ETWG as an overall coordinating body for HIV/AIDS and establish a sub-committee to specifically oversee EID services. The structure could be replicated at district level.
- Undertake mapping of partners (Private, Faith-based, NGOs sectors) for identifying and mobilizing additional resources for EID roll-out.
- Integrate EID into existing maternal, new born and child health service delivery and build staff capacity to utilize all contacts.
- Incorporate EID consumables into NAC and GoSL systems of better forecasting, quantification and procurement.
- Strengthen data management and utilization for robust reporting-feedback mechanism with possibility to ultimately integrate the system with HMIS



## Sierra Leone and Liberia Undertook Joint Training on WHO OneHealth Tool

By Dr Teniin Gakuruh/HSS and Mr Kahsu Gebremariam TA/HSS

#### **Background information**

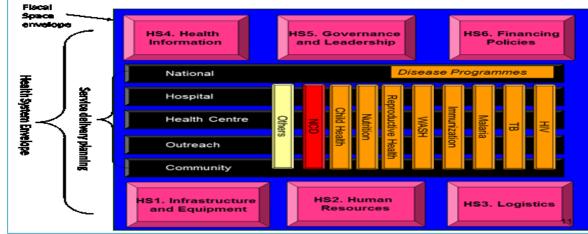
Sierra Leone has a costed National Health Sector Strategic Plan, (NHSSP 2010-2015) that serves as roadmap for stakeholders and health workers in implementing health care services. The NHSSP is implemented through a medium-term Joint Programme of Work and Funding (JPWF) and Annual Operational Plans (AOP) at national and district levels fulfilling the "one plan, one monitoring framework and one budget principle of the country compact".

The JPWF and AOP preparation process has been all inclusive and participatory. The JPWF and AOP are costed using Activity-Based Costing. According to the recently conducted joint Financial Management Assessment (FMA) report, the plan was judged to have a large funding gap as a needs-based plan. Considering the limited sector planning and budgeting capacity within the limited available time, the desired resource-based prioritization was not possible.

In this regard, WHO at the request of the Ministry of Health and Sanitation (MoHS) facilitated introduction of the newly developed UN "OneHealth planning and budgeting tool". The aim is to support MoHS to facilitate an evidence-based policy decision-making regarding effectiveness, feasibility and financial sustainability of alternative health strategies.

#### **Objectives:**

- To train trainers/facilitators of health sector planning from MoHS and WHO Country Offices in Sierra Leone and Liberia on the OneHealth Tool
- To support countries on use of OneHealth Tool for health sector planning and costing



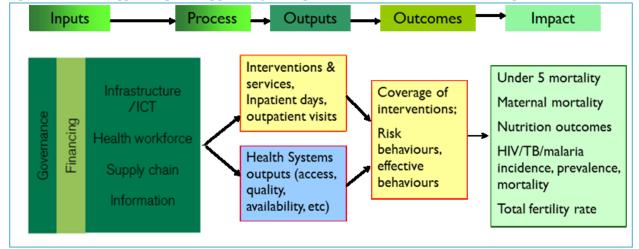


#### **Overview of the activities**

The OneHealth Tool: OneHealth is a single tool used for medium term strategic health planning, costing and budgeting in developing countries, with a focus on integrating planning and strengthening health systems. It is a unified tool for joint planning, costing, budgeting impact analysis, and financial space analysis.

Most existing costing tools take a diseasespecific approach. OneHealth is the first tool to present the detailed components of these existing tools in a uniform format and link them with a view to strengthening the overall capacity of national health systems (Fig. 1). It is software that incorporates UN epidemiological impact models to demonstrate achievable health gains. The OneHealth framework is built on six health system building blocks: health workforce, infrastructure, logistics and supply chain, health information system, health systems financing, leadership and governance. Service delivery is costed as part of the disease and programmespecific costs. This helps to link programmes to Health System Strengthening platform; and making costing as part of the planning process and considers the country fiscal space for budgeting. It also enables integrated planning bringing partners together to agree on directions for strategic plan scenarios. OneHealth supports a planning process from inputs and activities to outcome and impact (figure 2)





The results/outputs are those that will appear on the plan (document). The plan will have the followings:

- List of investments required (quantity and cost) to undertake the interventions
- Then the cost can be prepared in different way and will be presented with the fiscal space. This will help to see the resource gap.
- The outcome or impact that can be attained if the listed interventions are implemented – can be compared with MDG targets

- List of interventions with quantity and cost
- Finally, scenario will help to have needbased and resource-based plan. Example: the JPWF is need-based with very huge resource gap and has no alternative (prioritization of activities based on the limited availability of resources.

#### **Highlights of Training on OneHealth**

The training was conducted in Bo Town, Sierra Leone from 21-25 May 2012. It was an intensive residential training and was facilitated by two experts from the Futures Institute.

A total of 16 participants from the Ministries of Health of Sierra Leone and Liberia, experts from WHO IST/West Africa and the Country Offices in Sierra Leone and Liberia attended the training workshop.

The five day deliberations took the form of presentations on specific topics, exercises done after each presentation, discussions and plenary.

After the training, participants brainstormed on cascading the training and/or in using the Onehealth model such as the availability of data and populating the software with country specific data, use of the tool at sub-national level, and the importance of continuous support by WHO.

The following results were achieved from the training:

- Capacities were built in health planning, costing and budgeting using the UN OneHealth tool
- Knowledge and skill gained in navigating through the OneHealth model software and
- Road map for rolling the tool discussed and developed by both countries.

The next step is to finalize the road map for rolling the tool and preparation of the 2013 Health sector plan.



## Acute Malnutrition Situation in Children – 1<sup>st</sup> Quarter 2012

By: Ms Hannah Yankson, NUT

#### Introduction:

Child malnutrition is the single biggest contributor to under-five mortality due to the high susceptibility to infections and slow recovery from illness. In Sierra Leone, 6.9% of under five children are acutely malnourished (SMART 2010). Acute malnutrition reduces the ability to resist diseases and impairs a range of physiological functions in children. The most visible consequence is weight loss (wasting). This is often combined with growth failure, particularly during the first five years of life.

This report is focusing on the situation of acute malnutrition in children from 10 out of the 13 districts in the country for the period January to March 2012. Data from three districts was not incorporated due to delay in reporting.

#### Methodology

Routine nutrition data from health facilities is compiled on a monthly basis, collated using the Health Information System (HIS) and analyzed using the WHO growth standards (wt/ht z-score). The data was analyzed by district using standardized cut off points recommended by WHO (<-3 z-score for severe malnutrition, <-2 z to -3 z-score for moderate malnutrition and >-2 z-score for normal children) and colour codes (green for normal children, yellow for moderately malnourished children and red for severely malnourished children) (See table 1). The data was also analyzed into graphs to show comparative trends in the malnutrition situation in the first quarter of 2011 and 2012 (see figure 1-2 below).

#### Findings and discussions

A total of 309,560 children aged 6–59 months who access the PHUs were screened (see table 1). The data showed that for all the children screened, a total of 232, 529 (75.1%) were found to be normal with good nutritional status, 59,976 (19.4%) had moderate acute malnutrition (MAM) and 17,055 (5.5%) had severe acute malnutrition (SAM).

The data showed that Kenema district has the highest percentage (30.4%) of malnourished children; followed by Port Loko, districts with 29.5%. Many factors could contribute to the high rates of child malnutrition identified in these districts ranging from severe or repeated infectious diseases, poor food quality and house hold food allocation pattern due to cultural practices. However, this could further be investigated.

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District	Total No of Under fives Screened	Normal Nutrition status in under fives (>-2 z-score)		Moderate Acute Malnutrition status in under fives (<-2 z to -3 z-score)		-Ist quarter data Severe Acute Malnutrition status in under fives (<-3 z-score)	
		No.	%	No.	%	No.	%
Pujehun	22,159	16,712	75.4	4,047	18.3	1,400	6.3
Moyamba	32,898	24,695	75.1	6,610	20.1	1,593	4.8
Kenema	33,616	23,406	69.6	7,746	23.0	2,464	7.3
Kono	13,216	10,402	78.7	2,215	16.8	599	4.5
Kailahun	24,412	17,479	71.6	5,669	23.2	1,264	5.2
Bombali	44,090	37,225	84.4	5,771	13.1	1,094	2.5
Tonkolili	30,259	24,058	79.5	5,327	17.6	874	2.9
Kambia	15,662	11,540	73.7	3,312	21.1	810	5.2
PortLoko	25,340	17,863	70.5	5,828	23.0	1,649	6.5
Western Area	67,908	49,149	72.4	13,451	19.8	5,308	7.8
Grand Total	309,560	232,529	75.1	59,976	19.4	17,055	5.5

Table1: Breakdown of weight for height Z score by district (January – March 2012) -1st quarter data

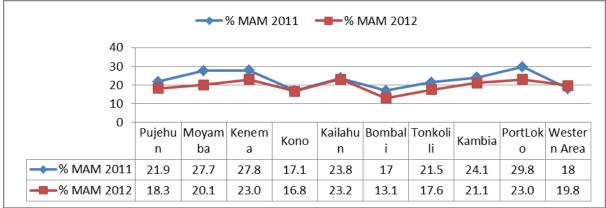
Source: MoHS HMIS nutrition surveillance data

Figures 1 & 2 show comparative analyses of moderate and severe acute malnutrition trends during the 1st quarter of 2011 and 2012. Marked reduction in MAM and SAM rates was observed in 2012 compared to 2011 with the exception of the Western Area which showed a higher MAM rates and an increase in SAM levels in Pujehun, Kenema and Kailahun districts. Reasons for this could be further investigated.

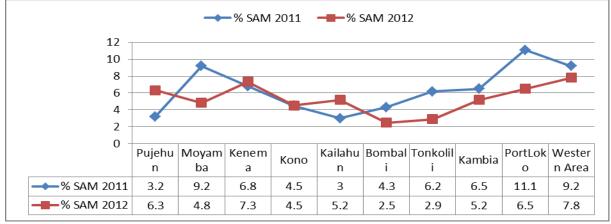
It is worth noting that the number of children identified as moderately and severely malnourished in the first quarter of 2012 reduced by 2.9% and 1.3% respectively compared to the same period in 2011. More children were screened (309,560) in 2012 compared to the same period in 2011 (278,755) manifesting an increase of 30,805 children screened. Out of the

children screened, the number with good nutrition status is higher (232,529) in 2012 compared to 2011 (197,519) showing a 4.2% increase. This could be as a result of nutrition interventions at community level focusing on prevention and treatment of malnutrition among which include: increase in the number of mother to mother support groups from 447 in 2011 to 1440 in order to promote nutrition education on infant and young child feeding practices and awareness raising on the availability of services for malnourished children, scaling up of outpatient therapeutic (OTP) sites for SAM from 245 in 2011 to 385 in 2012 and supplementary feeding sites from 543 to 554. It could also be as a result of active case finding and referrals to health facilities by partners working in communities. However this could be further verified.

#### Figure 1: Moderate Acute Malnutrition Trend by District 1st Quarter 2011 and 2012



#### Figure 2: Severe Acute Malnutrition Trend by District 1st Quarter 2011 and 2012



#### Conclusion

Based on the above, one could conclude that the malnutrition situation is taking a downward trend as indicated in the findings.

Also the surveillance system is making progress by providing information for action. Nevertheless, concerted effort is needed by all stakeholders in addressing malnutrition issues.

