1. Brief Description of Process

This Internal Appraisal was conducted for GAVI by independent technical expert Deborah McSmith, in close cooperation and with substantive inputs by GAVI CP team, and is based on reports and documentation supplied to GAVI by the national authorities and institutions in the country for the year 2013.

Liberia is reporting on Penta3, PCV13 and Yellow Fever vaccines and requesting NVS support in 2015 for the same, with no changes in vaccine presentations. The Country planned to launch the Rotavirus vaccine in Quarter 4 of 2014, but this is postponed to Q1 2015 due to the Ebola Virus Disease (EVD) outbreak. The Country also requests the first tranche of the new HSFP Grant in the amount of US$ 1,440,000.

2. Achievements and Constraints

Vaccine coverage results were mixed in 2013. For OPV3, DTP3, Pentavalent, and Yellow Fever vaccines, 2013 targets were exceeded, although coverage was in all cases lower than for 2012. For BCG and TT+, even though 2013 targets weren’t reached, coverage still increased slightly from 2012. 1st dose measles coverage decreased from 80% in 2012 to 73% in 2013.

Reasons given for not achieving all targets were a national health workers’ strike that lasted 2 months, and frequent breakdowns of county vehicles and motorbikes, which reduced outreach services and supportive supervision from county to health facilities.

The Liberia Demographic Health Survey 2013 indicated slightly different coverage results - 71.4% coverage for the third dose of Pentavalent and 74.2% for Measles, possibly due to data quality issues (entry errors, double counting, and denominator problems). The LDHS preliminary results indicate that infant mortality has reduced from 72 per 1,000 live births in 2007 to 54 in 2013 and that children 12 -23 months who received all basic vaccines increased from 39% in 2007 to 55% in 2013.

The annual DTP dropout rate was 8% in 2013, lower than the anticipated 11%. Wastage rates were within acceptable limits. The Yellow Fever vaccine wastage rate at 40% is at the maximum rate acceptable for 10ds vials, but the program did not provide explanation for this.

The country has struggled with unreliable denominator data for some years. Results of a 2008 National Housing and Population Census were finally published in 2012, and for 2013 a new birth cohort (4.3%) was calculated using the adjusted census population. The new denominators are in agreement with those derived from previous Polio NIDs data.

As in past years, EPI administrative coverage data is not disaggregated by sex as the Country perceives no gender-related barriers to immunization services and does not plan to collect sex-disaggregated coverage estimates in the future. Immunization campaigns target every child under 5 years regardless of gender, geographic location or socio-economic status. Per APR, Liberia is committed to providing free of charge health services including immunization to reduce financial barriers and preferential treatment (boys versus girls) by parents and care takers. It should be noted that although preferential treatment seems to be acknowledged as an issue sex-disaggregated data is not being collected.

UNICEF has developed an analysis and improvement plan for equity (under the 2014 GAVI business plan). This analysis focused on Montserrado county and proposed the Reach Every District (RED) approach.
3. Governance

The ICC met 3 times in 2013. A new TOR has been developed for the Health and Social Welfare Sector Coordination Committee (HWSGCC), previously called HSCC, and includes oversight for the GAVI HSS program activities and ensuring coordination between GAVI cash grants and between GAVI and other health sector initiatives. Thirty-one of 35 members attended the February 2014 HWSGCC meeting; membership includes ministries, donors, UN agencies, private sector, and NGOs.

4. Programme Management

Liberia has an updated cMYP for 2011 to 2016 (revised December 2012) and is reporting on the 2013 vaccine targets contained in the cMYP.

WHO developed a coverage improvement plan for Liberia, which was funded by the 2013 and 2014 GAVI business plan.

Immunization objectives and priority actions are derived from Liberia’s Essential Package of Health Services (EPHS). Main objectives and priority actions for the EPI programme for 2014 to 2015 include:

- Increase immunization coverage to at least 90% (nationally) and 80% (at county level) by December 2015
- ensure uninterrupted supply of vaccines and essential supplies at all levels by end of 2015
- continue to introduce new vaccines (Rota and IPV), technologies and policies in a realistic, sustainable, and timely manner into the immunization programme by December 2015
- strengthen the capacity of health workers to deliver effective immunization services between 2014-2015
- strengthen regular supportive supervision, monitoring, evaluation and data management systems at all levels
- reduce immunization drop-out rates from 9% to at least 5% by December 2015

Within these objectives priority actions include conducting micro-planning for routine immunization at county and health facility levels, with focus on hard-to-reach and under-served communities; construction of two regional vaccine stores and procurement of refrigerated van for vaccine distribution; introduction of RV vaccine and IPV into routine immunization services and conducting an HPV demonstration project in two counties.

5. Programme Delivery

Liberia experienced no postponed vaccine deliveries or stock outs in 2013.

An EVMA was conducted in April 2011 and 60% of recommended improvement tasks were completed by 2013, with remaining tasks pending or in progress. Pending tasks include

1. Systematic temperature monitoring study conducted and recommendation implemented; and
2. Temperature mapping carried out for all freezer rooms and cold rooms and recommendations implemented.

Improvements have included procurement of 200 solar refrigerators, 182 of which have been installed; distribution of 700 cold boxes to counties and health facilities; strengthened cold chain supportive supervision conducted in all counties; training and capacity building on use of fridge tag and DVD-MT; quarterly EPI reviews to assess performance and barriers; quarterly EPI data harmonization/PBF data validation; and targeted financial and technical support to 3 poorly performing counties to conduct periodic intensification of routine immunization (PIRI). Liberia also conducted defaulter tracing in all counties and procured motorbikes and vehicles for immunization, and met with government to advocate for increased financial support for immunization program. The next EVM is planned for 2014. Due to the ebola outbreak it has been postponed until later in the year.
No PIE was conducted in 2013 as Liberia didn't introduce any new vaccines. A PIE for PCV introduction was planned for October 2014 but has been postponed due to the on-going EVD outbreak.

The country has an integrated waste management and injection safety plan with a monitoring and evaluation component in line with the MOHSW Essential Package of Health services (EPHS). Sharps are disposed of through Incineration and burying. The major challenge with implementation is delayed repair of broken incinerators. This could be addressed through Objective 4 of the new HSS grant.

A sentinel site for rotavirus surveillance has been established and the ICC intends to review surveillance data and use it to monitor and evaluate the impact of vaccine introduction and use. Liberia now has dedicated vaccine pharmacovigilance capacity and a national AEFI expert review committee (a change from 2012) but does not yet have an institutional development plan for vaccine safety. The Country does have a risk communication strategy with preparedness plans to address vaccine crises.

The Cold Chain capacity strengthening described in the APR will help to position the Country for Rotavirus roll out later in 2014 and for introduction of IPV. Further CC strengthening will be supported by the HSS tranche that has been sent to the Country.

6. Data Quality

Liberia has made data quality a high priority and activities to improve it include adaptation of data collection tools, periodic desk reviews and staff trainings at national, country and district levels on data analysis and feedback. Data reporting has improved as a result of these efforts and the technical expertise (statistical, M&E, DQS-like methodology, Excel programming) within the government and/or in-country partners has been developed.

The HMIS is the primary source of immunization data in Liberia, it has been revitalized and is reportedly functional. Support to further strengthen the HMIS is still needed and can be provided through the new HSS proposal under Objective 2.

Liberia initiated a data quality self-assessment (DQS) in 2013 to determine level of agreement between data from health facility to county and county to central level. The Country conducts quarterly EPI data verification and harmonization exercises at all levels - Lot Quality Assessment Sampling (LQAS) and Assessment (Performance of Routine Information System Management (PRISM) Assessment) - supported by USAID, HSPF and Global Fund. The country also plans to revise HMIS data reporting instruments and form data verification teams at all levels.

Liberia is the first country where a GAVI supported data assessment has been implemented (with technical support from JSI). GAVI also participated directly in a training for immunization data quality assessment conducted in June 2014. The Liberia Demographic Health Survey conducted in 2013 appeared however to have data quality issues that raise questions about accuracy of vaccine coverage estimates contained therein.

7. Global Polio Eradication Initiative, if relevant

The Country collects polio NIDS data. In 2013 zero cases of Wild Polio Virus (WPV) were reported in Liberia. Liberia has been approved for IPV and planned to introduce in January 2015, but this will have to be confirmed in view of the EVD outbreak.

8. Health System Strengthening

The first GAVI HSS grant for Liberia was for the period 2007-2010, with a revised end date of 2012. The new grant was approved in February 2012, is for 2013-2015 with a total funding amount of $5,400,000 over 3 years (inclusive of the Performance Based Financing payment
For its first HSS grant, Liberia experienced some tranche disbursement delays and as a result some activities were delayed. The last tranche (US$ 1,022,500) was received in November 2013, therefore the APR actually describes activities implemented between November 2013 and May 2014, which included community health worker trainings, development of a community toolkit, support for outreach services, support for MOHSW to conduct an annual health sector review for the first time since 2007, training of County Health Resource Officers in the use of the integrated Human Resource Information System (iHRIS) software to manage HR records, updates of Micro plans for the 15 counties; training of M&E Officers and county level staff from seven counties in data use for county planning, and training on DVD-MT and Fridge Tag management.

Overall program performance seems satisfactory as per M&E framework. The total grant committed by GAVI was USD 8,770,000 (slightly different from what is noted in APR –USD 9,489,520). Out of committed grant, USD 7,330,000 had been approved by IRC of which 4,090,000 (56%) had been already disbursed. USD 3,240,000 is outstanding for which the country has plans as per 2014 and 2015 work plan. The country is requesting for the last tranche 1,440,000 which is in line with GAVI commitment.

The 2013-2015 (new) HSS grant objectives are to:

1. Increase access and utilization of Essential Package of Health Services (EPHS)
2. Strengthen and operationalize a well-coordinated M&E and Health Management Information System
3. Strengthen financial management systems
4. Enhance MOHSW logistical, human resource and technical capacity

The first tranche of $1.8M was disbursed in June 2014 in two parts: $1.1M directly to the Government, and $695k to UNICEF for the procurement of 1 refrigerated truck, 15 pick-ups and 2 walk-in cold rooms.

The current indicators that are used to measure GAVI HSS grant performance are similar to the National Health Plan monitoring framework and the performance based health financing performance. The Country has submitted a revised M&E framework in January 2014 and the revised framework includes all 6 GAVI mandatory indicators, along with the indicators on antenatal care coverage and skilled attendants at delivery, recommended by the GAVI HSS M&E review report. The framework further includes two impact indicators with baselines, data sources and targets for both.

Over 90% of public health facilities are implementing the Basic Package of Health Services (BPHS) that has been expanded and named Essential Package of Health Services in 2011. The implementation of BPHS and EPHS has increased access to health services nationwide and has contributed to the improvement in child health outcomes especially, immunization services. For example infant mortality reduced from 72 per 1,000 live births in 2007 to 54 in 2013 and under five mortality reduced from 111 per 1,000 live births in 2007 to 94 in 2013. Also, children 12 -23 months who received all basic vaccines increased from 39% in 2007 to 55% in 2013 (DHS 2013 preliminary results). Support from GAVI and partners improves the immunization program and the immunization status of children as evidenced by zero case of Wild Polio Virus (WPV) and the reduction in the outbreak of measles cases according to the HMIS and AFRO Polio monthly updates. The Ministry with support from various partners including GAVI has made significant progress in the development and expansion of its community health services program. Notable achievements include the recent development of a community health program roadmap and performance indicators list, training of community health workers in Integrated Community Case Management and provision of community health services. The Ministry conducted series of Data Use for action workshops for County Health Teams members for improved health services. The Ministry is gradually adopting the culture of information use for decision making as evidence by the conduct of various policies studies, the establishment of a functional HMIS and M&E Units, the review of indicator list, reporting instruments and the regular conduct of the annual accreditation surveys and review meetings. These activities have provided evidence for decision making for the strengthening of primary health care in Liberia. The improvement in M&E and health management information system has contributed to immunization data quality. The health sector with support
from partners and national government made progress in 2013, although there were daunting challenges that range from health workers' strike frequent delays in Government’s budgetary disbursements to the Ministry.

It is however clear from the on-going Ebola outbreak that the health system was very vulnerable to any epidemiological choc, and that the gains made in the past years were very fragile.

9. Use of non-HSS Cash Grants from GAVI

Liberia did not receive CSO (Type A & B) fund in 2013.

The Country received a Vaccine Introduction Grant (VIG) of US$ 155,000 in 2013 for the introduction of PCV-13 (in January 2014). Funds were used for capacity building; revision and production of data collection tools; advocacy, communication and social mobilization; monitoring and supportive supervision; and launching at national and county levels.

The last ISS tranche was provided in 2009, however Liberia reports the following carryover of funds:

<table>
<thead>
<tr>
<th>Amount US$</th>
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<tbody>
<tr>
<td><strong>Funds received during 2013</strong></td>
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<tr>
<td><strong>Remaining funds (carry over) from 2012</strong></td>
</tr>
<tr>
<td><strong>Total funds available in 2013</strong></td>
</tr>
<tr>
<td><strong>Total Expenditures in 2013</strong></td>
</tr>
<tr>
<td><strong>Balance carried over to 2014</strong></td>
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</table>

ISS carry over funds were used for allowance payments to national EPI staff; stationery supplies to support national and county levels operations; production of EPI data tools; and maintenance of EPI logistics (cold chain equipment, vehicles, motorbikes, refrigerators).

The APR describes in detail how ISS funds are managed in country by OFM and placed into an earmarked account at national level and then transferred to country accounts according to usual MoHSW procedure. Proper oversight is exercised by ICC/HSCC, which must first endorse the annual work plan, budget, and procurement plan, then funds for activities in counties are transferred into respective accounts with close monitoring.

GAVI’s ISS support is not reported on the national health sector budget. Request for ISS 2013 reward is not applicable as these are rollover funds from a prior award.

10. Financial Management

Liberia has a Health Sector Pooled Fund (HSPF) that operates as a funding mechanism for the counties to support health services. HSPF now supports 10 of 15 Counties to implement the basic health package. The main HSPF donors are DFID, UNICEF, and Irish Aid, with French government contributing through the fund for debt relief and EU also channeling support through the Fund.

The aide-memoire signed in May 2013, following an FMA, outlined GAVI cash grants to be managed as standalone funds. However, at MoHSW request, GAVI performed an in-country review in September 2013 to advise the MoHSW if and how its new HSS grant could be channelled through the HSPF mechanism. In the end, the MoHSW decided to keep the standalone arrangements at this time.

In follow up to the aide-memoire action plan, an Annual Work Plan and Budget were developed by the EPI Technical Coordinating Committee (TCC) in consultation with ICC/HSCC. An annual
procurement plan (APP) is being developed by the TCC and the HSCC TOR has been revised to include GAVI oversight.

The PFO team keeps track of the pending requirements and clarifications for financial management. The current status, as provided by PFO, is appended at end of Section 13 of this report. No external audit has been conducted for HSS grant in 2013. GAVI’s HSS support is not reported on the national health sector budget.

11. NVS Targets
Due to a global demand for PCV13, there is a reported shortage in supplies and the first shipment of vaccine to Liberia is not expected to be available until late 2014, which may result in low coverage rates for this vaccine.

In light of some decreases in NVS coverage between 2012 and 2013, and in view of a revised denominator, the Country may wish to review its cMYP targets for 2014 and consider whether they remain feasible or need to be adjusted.

The current Ebola outbreak in Liberia may have profound implications for the country’s ability to carry out its routine immunization program including data collection.

12. EPI Financing and Sustainability
In 2013 GAVI contributed 42% of Liberia’s immunization expenditures. Liberia is in the low-income country group for co-financing, meets minimum requirement for each vaccine, and in 2013 provided US$ 143K in co-financing contributions. The country will begin to co-finance PCV vaccine in 2014 and Rotavirus vaccine in 2015. 21% of the programme is funded by the government. Traditional vaccines continue to be fully funded by UNICEF.

Support from GAVI, in the form of new and under-used vaccines and injection supplies, is reported in the national health sector budget. No problems are described in the transfer of funds from national to county levels.

13. Renewal Recommendations

<table>
<thead>
<tr>
<th>Topic</th>
<th>Recommendation</th>
</tr>
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<tbody>
<tr>
<td>NVS</td>
<td>Renewal with/without a change in presentation once 2014 targets have been reviewed per first Action Point below</td>
</tr>
<tr>
<td>HSS</td>
<td>Provide first tranche of HSS grant once action points below for HSS grant have been completed. Implementation has started but is expected to be delayed due to ebola outbreak. Not clear when the country need the second tranche.</td>
</tr>
</tbody>
</table>

14. Other Recommended Actions

<table>
<thead>
<tr>
<th>Topic</th>
<th>Action Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVS targets for 2014</td>
<td>• Review 2014 vaccine targets and inform GAVI whether, based on this review, any targets will be revised.</td>
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</tbody>
</table>
| HSS M&E Framework narrative  | • Submit to GAVI the narrative for the M&E framework, which needs to address how M&E activities will be carried out and are aligned with the national health plan results framework; percentage of the HSS grant allocated to M&E, with breakdown by activity; and M&E system strengthening activities to be funded by the grant.  
• Describe briefly in the narrative how Country will ensure consistency with national and subnational |
<table>
<thead>
<tr>
<th></th>
<th>Responsible</th>
<th>Timeline</th>
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<tbody>
<tr>
<td></td>
<td>ICC</td>
<td>Next ICC meeting</td>
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<td></td>
<td>MOH</td>
<td>Novemb er 2014</td>
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M&E/results frameworks, clarifying the use of indicators, data collection tools, analytical plans and reporting systems. Include how the annual in-country review and reporting processes will serve as the basis for reporting on the results of HSS support provided through the GAVI grant.

- Indicate in the narrative intention to have an end-of-grant evaluation for the current GAVI HSS grant conducted by an independent third party. If the country does not plan to conduct it, or if it proposes to use an existing assessment/evaluation for this purpose, appropriate justification should be provided.
- Indicate in the narrative plans to independently assess the quality of administrative data and track changes in data quality over time, as well as how the HSS grant is used to help implement recommendations or agreed action items coming from previous data quality assessments.
- Submit the missing information on outcome indicators for the HSS M&E Framework.
- Ensure coherence between the revised M&E framework and the log frame of the GAVI HSS grant; any change in the framework should also be reflected in the log frame;

**Financial clarifications recommended by PFO**

**ISS/NVS**
- Funds of $155,000 provided by GAVI as NVS (Vaccine Introduction grant) have erroneously been accounted for as ISS funds. Country to revise ISS APR table (6.1) and ISS financial statement and provide to GAVI.
- Country to provide a 2013 NVS financial statement showing opening balance, funds received, detailed expenditure incurred (by activity or economic classification) and closing balance.

**HSS**
- Country to submit bank statement showing the December 31, 2013 closing balance of the GAVI HSS bank account

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Below is further information on revised timelines of EPI activities due to Ebola outbreak.

<table>
<thead>
<tr>
<th>Revised implementation Timeline for 2014 EPI Activities</th>
<th>Plan A Timeline</th>
<th>Plan B Timeline</th>
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<tbody>
<tr>
<td><strong>Sn.</strong></td>
<td><strong>Activity</strong></td>
<td><strong>Nov. 24-30, 2014</strong></td>
</tr>
<tr>
<td>1.</td>
<td>Integrated Measles, Vit. “A” and Polio Round-1</td>
<td></td>
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<tr>
<td>3.</td>
<td>Introduction of Rota and IPV</td>
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<td>4.</td>
<td>Update Training Guidelines (HPV, Rota &amp; IPV)</td>
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<tr>
<td>5.</td>
<td>Conduct Pneumo PIE and EVM Project</td>
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<tr>
<td>6.</td>
<td>Introduction of HPV Demo Project</td>
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