Maternal Syphilis Liberia Y4-Y5 Top Up and Y6 Extension Proposal

In August 2020, GiveWell awarded a 5-year grant to Evidence Action to implement a Maternal Syphilis Program in Liberia. The primary aim of the funding was to support the Ministry of Health of Liberia to adopt HIV/syphilis dual testing, with two intended outcomes: (1) to achieve parity between HIV and syphilis screening among ANC-going pregnant women, and, (2) to achieve as high of a syphilis treatment rate as feasible.

As we approached the midpoint of the grant, we conducted a financial runway analysis to assess the financial security of the program and looked across various program process and outcome indicators to evaluate whether we would be in a position to exit the program responsibly at the end of Year 5. Through these analyses, we have determined that additional funding is required for Years 4-5 (\$831,412) and that we will need an additional Year 6 of programming (\$1,215,414).

The content contained in the proposal is as follows:

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Overview of Program Progress and Outcomes To-Date

As of the end of Year 3, we have made immense progress in a number of program areas. Detailed updates on what has been achieved can be found in the six-monthly reports here. Highlighting the most significant achievements:

- *In healthcare provider training and mentorship:*
 - Developed and frequently iterated on a program package of curricula, job aids, and training and supervision checklists and reporting tools that enabled consistent, quality training and supervision by master trainers and high quality antenatal care services by healthcare providers;
 - Completed a full training-of-trainers cascade across all fifteen counties in Liberia where
 we trained 132 master trainers, 4,820 frontline healthcare providers, and all of the 566
 targeted health facilities (nearly every facility in Liberia which provides ANC services);
 - <u>Facilitated over 700 supportive supervision visits</u> by county-based master trainers during which the master trainers continued to reinforce the skills and knowledge healthcare providers need to deliver high-quality syphilis screening and treatment services;
 - <u>Designed and launched a data-driven targeted supportive supervision strategy</u> whereby we are able to more cost-effectively manage our resources and direct supportive supervision to those health facilities where there is sub-par performance against key program indicators.
- *In supply chain management and product availability:*
 - <u>Created a data-informed, facility-level commodity quantification tool</u> to reduce the risk of stock outs at the national and facility levels;
 - Continuously implemented coordinated commodity pushes and facilitated last mile delivery to health facilities of HIV/syphilis dual tests and benzathine penicillin in advance of on-site training and where required to address stock out challenges;
 - <u>Provided critical, gap-filling donations</u> of 89,450 dual tests in May 2021, 86,675 dual tests in June 2022, and 91,600 vials of benzathine penicillin in August 2023, all of which enabled the rapid acceleration of dual test adoption;
 - <u>Successfully advocated and supported NACP to increase their procurement of dual tests via Global Fund by 212%</u> in the last two years (from the 217,425 units initially budgeted to 461,600 dual tests procured) such that additional gap-filling donations of dual tests are no longer required from Evidence Action;
 - Secured a budget commitment for the procurement of 778,375 HIV/syphilis dual tests and 435,150 vials of benzathine penicillin via Global Fund between 2024-2026 ensuring there would be enough tests and drugs for all pregnant women to access syphilis services over the next three years;
 - <u>Inclusion of HIV/syphilis dual test products on facility commodity requisition forms and in the electronic Logistics Management Information System</u> to ensure health facilities can requisition dual tests using the established supply chain.

¹ The most recent six-month report covering July 15th, 2023 to January 15th, 2024 has been uploaded to this folder.

- *In monitoring and evaluation*:
 - Revised a key national data tool, the Health Management Information System monthly reporting form, to appropriately capture syphilis screening and treatment data, to both elevate the importance of these services within government and to generate insights that can be used to drive program decisions;
 - Revised the HIV Testing and Counseling Register to capture whether a syphilis test was
 done and the results, creating a dedicated place for facility staff to record the results of
 HIV/syphilis dual testing;
 - <u>Implemented the first Comprehensive Facility Survey</u> in September 2022 in 48 health facilities sampled from the 157 trained facilities across Montserrado, Margibi, and Grand Bassa counties, from which we attained rich data on program quality and impact, including estimating coverage of syphilis screening and treatment services;
 - <u>Implemented the second Comprehensive Facility Survey</u> in August 2023 in 67 health facilities sampled from the 561 trained facilities² throughout the country, from which we obtained more robust data to further understand coverage of syphilis screening and treatment among ANC-going pregnant women;
 - <u>Developed two key program monitoring dashboards</u>, one which utilizes real-time facility reported data available on the DHIS2 to assess facility progress and gaps in syphilis screening and treatment, and the other which tracks thematic issues identified through supportive supervision activities and next steps aimed at resolving them.
- *In creating an enabling environment:*
 - Revised the National HIV Testing Guidelines in mid-2020 to recommend the use of the dual HIV/syphilis tests when screening pregnant women for HIV, an essential policy achievement which paved the way for the program;
 - <u>Built relationships with other NGOs and leveraged their resources to expand the amount of support devoted to syphilis screening and treatment</u> as these other NGOs committed to financially supporting the roll out of HIV/syphilis dual testing in their focal counties or in supporting commodity availability;
 - <u>Brought global visibility to the progress made in Liberia</u> in dual test adoption and strengthening of syphilis treatment via participation in WHO-led webinars and international HIV conferences.

Budget

Initial Commitment

The initial grant to Evidence Action totaled \$3,506,934 in direct program expenses with an additional \$387,408 "contingency fund" available to Evidence Action when the program needed to donate either HIV/syphilis dual tests or benzathine penicillin in excess of what was originally budgeted. This "contingency fund" was established due to high uncertainty regarding the extent to which Evidence Action would need to backstop availability of key commodities, especially dual tests, as it was unknown when Global Fund would take over the full procurement needs.

² The sampling frame for the second Comprehensive Facility Survey contains 561 health facilities whereas we have trained 566 over the course of the program. A handful of trained facilities closed down and so the sampling frame for the survey consisted only of active, operating health facilities.

In the cost-effectiveness modeling which led to the funding decision, GiveWell assumed the full cost of \$3,894,342 (direct program expenses + contingency), and estimated that the program was 13.5x as cost-effective as unconditional cash transfers via GiveDirectly. GiveWell then further modeled a scenario in which Evidence Action would need an additional \$500,000 for enhanced program monitoring (total cost of \$4,414,342); this scenario had a cost-effectiveness of 11.9x.

Y4-Y5 Shortfall

As of August 31, 2023 (the end of Year 3), we have spent \$2,073,837 in direct program expenses and \$286,684 from the "contingency fund". For ease of understanding, we've separated out the "contingency fund" from the analysis of program spend. **Table 1** below summarizes our initial budgeted amounts for each program year, our actual spend for Years 1-3, and our forecasted spend for Years 4-5. A more detailed breakdown of the revised Years 4-5 budget can be found here.

 Table 1: Budget vs. Actuals / Updated Forecasts for Years 1-5 (Updated)

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Original Direct Program Budget	\$782,922	\$781,342	\$761,639	\$540,741	\$640,290	\$3,506,934
Actual / Forecasted Direct Program Expenses	\$429,925	\$848,407	\$795,505	\$1,148,746 + \$51,861 in carry over spend from Year 3 ³	\$1,063,902	\$4,338,346
Variance Between Budgeted & Spent (excluding contingency)	+ \$352,997	- \$67,065	- \$33,866	- \$659,866	- \$423,612	- \$831,412
Contingency Used	\$35,973	\$205,035	\$45,675	\$ -	\$ -	\$286,684

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³ Originally, we forecasted Year 3 spend to be \$977,693 (excluding any funds used from the contingency). The final spend in Year 3 came out to \$795,505. However, there remained \$51,861 in costs from Year 3 that have carried over into the first months of Year 4 -- these are due to our M&E vendor, The Khana Group, who submitted invoices for the 2023 CFS later than anticipated and because some activities were postponed to late November, early December due to the election.

Year 6 Budget

As noted, for Year 6, we are requesting \$1,215,414. This is allocated across key spending categories as follows in **Table 2**. A more detailed breakdown of the budget proposal can be found here.

 Table 2: Year 6 Budget (Updated)

	Year 6 (Sep 2025-Aug 2026)
Global Personnel and Fringe	\$104,146
Regional Personnel and Fringe	\$33,006
Local Personnel and Fringe	\$355,574
Travel	\$54,712
Operations	\$92,187
Program Implementation	\$98,041
Monitoring and Evaluation	\$162,875
Regional / Sub- Regional Pool	\$112,305
Global IDC @ 20%	\$202,569
Total	\$1,215,414

Proposal Rationale

Why is Additional Funding Needed for Years 4-5?

When submitting an initial budget in July 2020, Evidence Action sought to make its best guess as to program expenses for Years 1-5, recognizing that we had significant unknowns having never implemented a Maternal Syphilis Program nor worked in Liberia previously. At the time, it was also difficult to predict how COVID would affect the long term economic stability of global markets and Liberia specifically. **Table 3** breaks down by spending category how the initially predicted budget compares to our recently revised budget forecasts for Years 4-5.

Table 3: Budget Analysis by Spending Category for Years 4 - 5 using Projected Expenses (Updated)⁴

	Year 4 (Sep 2023-Aug 2024)			Year 5 (Sep 2024-Aug 2025)		
	Originally Budgeted	Projected Spend	Variance	Originally Budgeted	Projected Spend	Variance
Global Personnel and Fringe	\$30,400	\$89,508	- \$59,108	\$30,400	\$77,792	- \$47,392
Regional Personnel and Fringe	\$0	\$31,960	- \$31,960	\$0	\$30,780	- \$30,780
Local Personnel and Fringe	\$244,800	\$325,990	- \$81,190	\$244,800	\$334,463	- \$89,663

⁴ This table excludes the carry over expenditure from Year 3.

	Year 4 (Sep 2023-Aug 2024)			Year 5 (Sep 2024-Aug 2025)		
	Originally Budgeted	Projected Spend	Variance	Originally Budgeted	Projected Spend	Variance
Travel	\$33,600	\$45,668	- \$12,068	\$33,600	\$47,498	- \$13,898
Operations	\$10,320	\$97,879	- \$87,559	\$10,320	\$86,961	- \$79,641
Program Implementation	\$71,586	\$136,967	- \$65,381	\$71,586	\$108,319	- \$36,733
Monitoring and Evaluation	\$47,955	\$146,363	- \$98,408	\$128,455	\$92,700	- \$35,755
Regional / Sub- Regional Pool	\$19,594	\$82,952	- \$63,358	\$23,458	\$108,071	- \$84,613
Global IDC @ 20% ⁵	\$82,486	\$191,458	- \$108,972	\$97,671	\$177,317	- \$79,646
Total	\$540,741	\$1,148,746	- \$608,005	\$640,290	\$1,063,902	- \$423,612

As demonstrated in **Table 3**, the new forecasts for Years 4-5 are higher in every spending category as compared to the originally developed budget for those years. The key driving factors behind the need for additional funding include: (1) costs which were not accounted for during the initial budgeting process; (2) internal restructuring within Evidence Action; and (3) inclusion of inflation rates.

- (1) <u>Unanticipated Program Costs</u> These are summarized <u>here</u>.
- (2) Evidence Action's Internal Regional Restructure Evidence Action went through an internal reorganization in April 2022 that resulted in the creation of two Sub-Regional teams in our Africa Region: the West and Central Africa (WCA) Sub-Regional team and the East and Southern Africa (ESA) Sub-Regional team. As a result, in addition to the Africa Regional cost pool which programs must contribute to, there are now two Sub-Regional cost pools which are split proportionally among the programs implemented in the given sub-region. The Regional and Sub-Regional cost pools cover critical program functions related to HR, finance & administration, procurement, monitoring and evaluation, and IT. The Liberia program's share of the WCA Sub-Regional cost pool was not included in the original budget but has been added to this forecast, driving a large proportion of the cost increase in that bucket.
- (3) <u>Inclusion of Inflation</u> In a budgeting oversight, Evidence Action did not include any inflation in its original budget proposal. Although certain costs are not subject to inflation (namely the cost of donated commodities), staff salaries and certain other variable costs would increase year-on-year. Due to the instability in the economy and the ongoing conflicts in Europe over the last few years, we have witnessed even more increased prices related to inflation and fuel prices, especially in the Africa Region. Looking at fuel prices more specifically, when Evidence Action first began working in Liberia in February 2020, a gallon of fuel cost ~\$3.50. In the past year and a half, fuel prices spiked to \$8.00 per gallon and have only recently settled at \$6.00-\$7.00 per gallon. In an attempt to address these fluctuating costs, Evidence Action included a 6% year-on-year inflation

⁵ Based on projected 2022 actual expenditure and the 2023 budget, the Evidence Action IDC rate increased from 18% to 20%. We have included the higher rate in our proposal budget to ensure that we have fully costed the activities in this budget.

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and cost-of-living rate projection.⁶ This subsequently increased all applicable individual expenses that made up our projections for Y4 and Y5 budgets (namely, salaries of staff, costs of transport, and per diem and transportation reimbursements rates paid in program implementation).

Why is a 6th Year Needed?

The key question in front of Evidence Action when determining whether 5 years is sufficient for the Maternal Syphilis Program in Liberia or whether an additional year is required is whether or not we feel we can responsibly exit. We define a responsible exit as ensuring the government is equipped and capable of continuing the program and that gains made in syphilis screening and treatment coverage can be sustained (in other words, that there's no adverse impacts to the program in the event Evidence Action ends its support). Based on our assessment of government capacity and the program activities which are pending, we believe that an additional program year where we are operating at full capacity is required to responsibly exit. Key reasons are:

- Impacts of COVID-19 Initially, Evidence Action and the National AIDS and STI Control Program (NACP) had planned to start scaling up dual testing in ~March-April 2021. As we were about to launch the first phase of the training-of-trainers cascade, the Delta variant reached Liberia and COVID cases started increasing dramatically. In line with the MoH and Evidence Action's internal COVID policies, we decided at the time to delay the training cascade until COVID cases declined and ended up training the first cohort of master trainers in mid-September. offsetting our program timeline by approx. 6 months. As a consequence, we have only just concluded the training of the final targeted health facilities in May-July of 2023 (216 health facilities across seven counties). These last facilities are in some of the hardest to reach regions of the country and face the most neglect due to inaccessibility during the rainy season. Furthermore, many of these areas demonstrated the highest prevalence of syphilis in the 2017 sentinel survey, so while they are more rural and less densely populated, 31% of expected syphilis cases (approx. 1,700 syphilis-positive pregnant women per year) are within these most recently trained counties. Therefore, establishing high syphilis treatment coverage is crucial in this area and, as a consequence, it is critical to ensure we have sufficient time (preferably three years rather than two) to fully integrate syphilis screening and treatment services within these facilities. Based on our assessment of the evidence base and our experiences in Liberia thus far (described in more detail below), we believe that, without this additional year of mentorship and supportive supervision, it is likely some of these facilities would discontinue providing syphilis screening and treatment because providers will prioritize other areas having lacked the time to fully integrate syphilis services into routine practice and missing the frequent reminders and coaching provided by the master trainers.
- <u>Systemic Supply Chain Issues</u> There are numerous structural challenges in the Liberian supply chain which have been known from the outset (see <u>initial scoping report</u> and <u>addendum</u>). Additionally, there are many separate supply chain actors who lead discrete logistical components and/or decision-making processes in the system. Recognizing these challenges and the system's complex structure, Evidence Action had identified the supply chain as the one of the key potential failure points of the program and hypothesized that gaps in syphilis screening and treatment following scale-up of dual testing would be due primarily to inconsistent availability of dual tests and/or benzathine penicillin in health facilities. Since Year 1, we have implemented a number of

⁶ In other program budgets submitted to GiveWell in the last year, the assumed year-on-year inflation rate was 4%. Here, we have increased this to 6% given the cost trends seen in Liberia over the past several years.

approaches to mitigate stock out issues among health facilities (see <u>above</u>). Though much of this has been successful, additional work is required to reach our targets for availability of dual tests and benzathine penicillin⁷ and then maintain availability at those target levels. Much of the remaining challenges are entrenched in the system. The most significant of these include: (1) facilities are not consistently submitting stock status report and requisition forms which are required for resupply; (2) since 2019, the country has only managed three rather than four quarterly distributions each year leaving facilities prone to stock out between distribution cycles; (3) the picking and packing process at the Central Medical Store is disorganized and lacks oversight, resulting in the wrong products being dispatched to facilities or in the wrong quantities; and, (4) there is a general absence of frequent inventorying and supply planning which leaves the government unaware of impending wide-scale stock outs. Given the difficult nature of these challenges, and that Evidence Action cannot independently implement solutions to them but must rather collaborate with partners, we will require an additional program year to iterate and implement different solutions to stabilize the availability of dual tests and benzathine penicillin among health facilities.

- Addressing Longer Term Availability of Dual Tests and Benzathine Penicillin The main HIV funder in Liberia is The Global Fund, which operates via three year funding cycles. Up to now, NACP has relied heavily on Evidence Action's support in the quantification of dual tests and benzathine penicillin to include in these Global Fund proposals and in purchase orders which are placed annually within the three year funding period. The agreement development for the funding cycle which spans 2024 to 2026 just concluded and, following our advocacy and support, NACP included a budget for the procurement of 778,375 HIV/syphilis dual tests and 435,150 vials of benzathine penicillin over the next three years. If we were to extend to a 6th year, in the midst of that final program year, the country would be working on the proposal process for the funding cycle which would span 2027 to 2029. By extending the program timeline by this additional year, it allows us additional time to strengthen NACP's capacity to quantify these specific commodities and provides the opportunity to influence the funding proposal for 2027 to 2029. If, on the other hand, we conclude our program work in Year 5, we run the risk that the country would not budget for sufficient volumes of test kits or drugs leading to disruptions in syphilis screening and treatment services.
- Measured and Monitored Step-Back from County-Level Support As of September 2023, the facilities which were part of the first phase of scale-up have been provided hands-on mentorship via periodic supportive supervision for approximately two years. Evidence Action and NACP are aiming to begin transitioning away from intensive program support in these counties in Year 4. This aligns with the initial program plan whereby we surged county-level capacity to support the dual test product introduction and then would pivot toward integrating syphilis components into routine HIV and ANC program activities. This transition, once started, will be monitored very closely so as to ensure that, in stepping back from these counties, there are no adverse impacts on syphilis screening and treatment rates. We hypothesize that this process of stepping away and "graduating" counties from intensive support will require iteration and time to optimize. Further, because the final phase of training only just concluded, we will require that same time of careful and measured step-back for these later trained facilities, thereby requiring us to extend our program activities into Year 6.

⁷ Based on comparable product availability, our target is at least 90% availability of dual tests and at least 85% availability of benzathine penicillin.

- Full Integration of Program Activities Within NACP Workplans There are a number of program activities which Evidence Action has been leading and/or funding that would ultimately need to be integrated into NACP workplans such that any emerging gaps in syphilis screening and treatment coverage are identified and addressed efficiently by NACP going forward. Most of these activities relate either to supply chain (as discussed), to facility mentorship / supportive supervision, or to monitoring and evaluation. Based on our assessment, an additional year of programming will be crucial to ensuring these activities are integrated appropriately. As one example, Evidence Action has developed a system for targeted supportive supervision in which facilities are identified for support via an analysis of their reported syphilis indicators, master trainers are provided lunch and transport allowance to reach the facility to provide on-site mentorship, and then findings from the visit are reported back and entered into a supportive supervision dashboard which tracks thematic issues. In this case, we will ultimately want NACP to adopt this process as its own, or to integrate components of it into existing work streams such as on-site data verification activities, all of which will require time and continuous support to accomplish. In Year 6, Evidence Action's intention is not to continue leading these program management activities but rather to fill any remaining capacity gaps within NACP to lead these activities themselves. Remaining as a partner during this year would allow us to assess how this process is going and be on hand when needed to ensure that syphilis screening and treatment rates remain steady amid NACP's takeover of key functions.
- <u>Conducting Formal Wrap-Up Meetings</u> There are several formal close-out activities that we would need to undertake in the lead up to ending the Maternal Syphilis Program in Liberia. We are estimating these will take approximately three months, though that timeline may be extended as we do not yet know the full scope of responsibilities expected by the Ministry of Health when ending a program partnership. Our strong preference is to take on these activities in Year 6 as attempting to integrate them into the Year 5 workplan would dramatically reduce the runway for continued program implementation. Some of these close out activities are likely to include final meetings with the fifteen County Health Teams, relevant MoH stakeholders, and key partners; program financial reporting to the Ministry of Health; office shutdown and reconciliation of assets (in the event there is no additional program brought online in Liberia); and, a grant conclusion celebration with NACP and other stakeholders.

Discussion of Syphilis Screening and Treatment Coverage Hypotheticals With and Without Additional Funding

The Liberia program has two primary intended outcomes: (1) to achieve parity between HIV and syphilis screening among ANC-going pregnant women, and, (2) to achieve as high of a syphilis treatment rate as feasible. In setting specific targets for each outcome, during the grant investigation, Evidence Action predicted that, by the end of Year 5, we would attain 86% syphilis screening coverage among ANC-going pregnant women and 77% treatment coverage among those testing positive for syphilis.

Based on the 2022 and 2023 Comprehensive Facility Survey results, we are on track to achieve these targets. In the most recent survey, we estimated that 88% of syphilis-positive pregnant women were treated with benzathine penicillin among facilities which have been trained in the program. We then further extrapolated from the survey findings to estimate that, as of December 2023, 68% of ANC-going pregnant women across Liberia have been tested for syphilis (see **Figure 1** for the trend over time since

launching the pilot in 2020).⁸ A more thorough write-up of how screening and treatment coverage were estimated following the 2023 Survey can be found here.



Figure 1: Syphilis Screening Coverage, Estimated Among ANC-Going Pregnant Women (Updated)

In making this funding request, Evidence Action considered the impact of the additional funds and how the counterfactual may look in the event the funding isn't attained. Based on our experience over the past three years, the capacity which NACP has and has not demonstrated, and the work still to be done, we believe there is a high likelihood that, without these additional funds, syphilis screening and treatment coverage would stop increasing, and likely, would decline at least somewhat from the levels we have achieved up to now. As a consequence, there would be a significant number of pregnant women who would be going without syphilis screening and/or syphilis treatment that would otherwise be able to access these services if we were able to continue our technical support at our current capacity.

Our conclusions as to the consequences should Evidence Action be unable to continue its current scope and scale of support are based on our observations, experience in Liberia and other geographies, and the general evidence base. Namely, without this additional funding:

We would expect reduced visibility and prioritization of maternal syphilis among the incredibly busy staff at NACP and the Ministry of Health more broadly. There have been a number of structural changes in staffing at NACP through which some of our greatest program advocates left their roles. In September 2022, the Program Manager of NACP was replaced; the outgoing Program Manager had been in the role for over a decade and the incoming one had been recruited from outside the HIV Program. At the same time, the Deputy Program Manager for NACP also stepped down from her role. Finally, in August 2023, the Infectious Diseases Lead took a two year leave from his role to pursue a PhD in the United States. While we have worked hard to cultivate new relationships and develop new program champions, that process takes time. With only two years remaining in the current budget, these new program leaders may not be as equipped as we would require for them to maintain the same prioritization and attention to this program given the many competing priorities within NACP and the continuous neglect STI programming has faced historically.

⁸ National syphilis screening coverage was not directly measured in the survey as the survey focused on those counties which had been onboarded into the program before the survey launched. Therefore, to estimate national coverage, it required extrapolating from the survey findings.

- We would expect less consistent procurement and supply planning for dual tests and benzathine penicillin at the national level. As noted above, Evidence Action is still instrumental in much of the activities surrounding the national quantification for HIV/syphilis dual tests and benzathine penicillin. Without our ability to provide this support, especially during the proposal development process for the Global Fund funding cycle spanning 2027 to 2029, there is a substantial risk that the country does not budget for nor procure sufficient volumes of either commodity, thereby leading to inconsistent availability and rationing in both screening and treatment. Furthermore, specifically in regard to availability of treatment, there is a likelihood that Global Fund will expect the MoH to take on greater responsibility for the procurement of STI commodities, including benzathine penicillin going forward. This will require the government to allocate funding toward benzathine penicillin and then procure the drugs via a tendering process. As this comes to pass, we predict a high risk of more inconsistent availability of benzathine penicillin in the short term, and would prioritize supporting the MoH in this process in whatever ways we can so that there are no large scale shortages in Liberia.
- We would expect increased rates of stock outs among health facilities of dual tests and especially benzathine penicillin. In addition to the support we are providing in national-level quantification and procurement of dual tests and benzathine penicillin, we are also providing substantial technical and financial support to the distribution of these commodities from the Central Medical Store to the County Depots and on to last mile health facilities. The support we provide in this area varies from paying for the distribution directly, including using our vehicle to do the distribution, to working with County Pharmacists to ensure facilities are requisitioning the commodities when needed, to coordinating among partners to develop more wide-ranging solutions to strengthen the supply chain. Given how new both⁹ products are, it's very likely that stock out rates would increase in the event that we need to reduce these areas of support or end them entirely.
 - Furthermore, a number of substantive changes have taken place recently and will be taking place in the coming months related to the structure and management of the supply chain system. With how recent these changes have been, it's crucial for Evidence Action to maintain steady support to address new and emerging bottlenecks that would spillover into stock outs. Specifically, in Sept. 2022, the World Food Programme took over the responsibility of commodity distribution (this process was previously managed by the government entity, the Central Medical Store). Now, by Oct. 1st, 2023, it is expected that the World Food Programme will also take over warehouse management and the picking and packing process (this again was previously managed by the Central Medical Store). This is an abrupt departure from how the supply chain had been managed for well over a decade and so it is difficult to predict what will be improved and what new issues will arise amid this restructuring. Since syphilis commodities are neglected relative to other commodities such as those for HIV or malaria, our continued presence as a partner and the financial / logistical support we can provide will mitigate any downstream gaps in supply availability which may result from these changes.
- We would expect increased instances where frontline healthcare providers lack the knowledge or skills to deliver syphilis screening and treatment services consistently to pregnant women. Evidence in the literature has demonstrated that supportive supervision and mentoring of healthcare providers is critical, in addition to training, to ensure that they continue to adhere to syphilis care guidelines,

⁹ While benzathine penicillin is technically not a new product in Liberia, since syphilis screening was largely absent before dual test adoption, most facilities are not historically familiar with managing the stock of this medicine.

particularly in the area of syphilis treatment.¹⁰ Without additional funding, Evidence Action would need to substantially decrease the number of supportive supervision visits which we fund in Years 4-5. Furthermore, without the additional year of programming, the facilities in the counties trained most recently would have the least amount of time for any kind of supportive supervision having just been trained recently. Supportive supervision specific to maternal syphilis is most critical in this dual test product introduction phase, after which the supportive supervision can be integrated into other routine activities with careful monitoring, as we intend to do with the additional funds we are seeking. In this way, we will be able to step carefully such that the actions we are taking do not put at risk the high levels of knowledge and adherence to guidelines which providers are currently demonstrating.

- We expect reduced frequency of program monitoring and data-driven decision making, particularly evidenced in a lack of attention to potential emerging gaps in services. Much of our progress in the area of monitoring and evaluation is reliant on the MLE Associate Manager we brought on in Year 2 and the findings of the Comprehensive Facility Surveys. Without this additional funding, we would need to let go of the MLE Associate Manager, we would need to reduce the total number of facility surveys from three to four over the life of the program, and we would need to cancel our plans to introduce quarterly 'mini-surveying'. These changes, combined with some of the points raised above, would make it very challenging for the program to continue leveraging data in the same way. As a consequence, we believe it is likely that NACP M&E staff would review syphilis data more infrequently (especially since it is not an indicator that they are accountable for in the same way as HIV) and would be less prone to notice gaps that could be addressed.

¹⁰ Althabe, Fernando et al. "A multifaceted intervention to improve syphilis screening and treatment in pregnant women in Kinshasa, Democratic Republic of the Congo and in Lusaka, Zambia: a cluster randomised controlled trial." The Lancet. Global health vol. 7,5 (2019): e655-e663. doi:10.1016/S2214-109X(19)30075-0