EVALUATING SAVING LIVES AT BIRTH

Evaluation Report: Rounds One to Eight (2011-2020)

MAY 2020

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EXECUTIVE SUMMARY

PURPOSE OF THE EVALUATION

Saving Lives at Birth (SL@B): A Grand Challenge for Development brings together a global community working on innovation to combat preventable maternal and newborn deaths and stillbirths on a global scale. Launched in 2011, SL@B is a partnership of key global health stakeholders including the United States Agency for International Development (USAID), the Norwegian Agency for Development Cooperation (NORAD), the Bill and Melinda Gates Foundation (BMGF), Grand Challenges Canada (GCC), the U.K. Department for International Development (DFID), and the Korea International Cooperation Agency (KOICA). The SL@B program has funded a total of 147 innovations,* of which 116 are unique, and 92 organizations addressing critical issues in maternal and newborn health (MNH) in low-resource settings.

The SL@B portfolio spans different types of innovations: products, including devices and diagnostics (61%), mHealth solutions (11%), drugs and vaccines (12%), and service delivery approaches (16%). To fund these innovations, SL@B used an open call approach through which it solicited innovative ideas in the MNH field with no restrictions on types of organizations, geographic setting, or specific disease. Most SL@B grantees are academic institutions (40%) and non-profit organizations (38%), followed by for-profit (20%) and public international organizations (PIOs) (2%), with the majority of organizations headquartered in high-income countries (HICs, 83%) versus low- and middle-income countries (LMICs, 17%). Of the HIC-based organizations, 5% had their local country offices as the primary SL@B recipient. Awards were made based on the stage of innovation at three levels: seed, validation, and transition to scale (TTS) with corresponding grant amounts ranging from 250,000 USD to 2 million USD .

Two SL@B funding partners (USAID and GCC) engaged Duke University in 2018 to design and conduct an evaluation of the program to determine if it was achieving its intended impact and to generate data-driven recommendations for future initiatives. The Evaluating SL@B (ESL@B) research team designed an evaluation around four key evaluation questions, informed by the original call for proposals and SL@B's theory of change (TOC)[1] (see Appendix I for the SL@B TOC diagram):

1. How does SL@B map onto the global landscape of MNH innovation?
2. Does SL@B fill a gap in MNH innovation funding?
3. What has been the impact of SL@B on sourcing and scaling MNH innovations between 2011 and 2020?
4. What is the potential impact of SL@B-funded innovations on MNH mortality and in the MNH ecosystem?

This final report draws from multiple data sources and analyses, many of which have been shared through earlier reports and briefs, including the interim synthesis report.

DATA COLLECTION, METHODS, AND LIMITATIONS

This evaluation utilizes a quantitative and qualitative mixed-methods approach using data from multiple sources: 1) program data on the SL@B funding portfolio provided by USAID and GCC and validated by the ESL@B team, 2) extensive desk research of publicly available information on the MNH funding landscape, 3) 80 semi-structured interviews with key informants, and 4) data gathered from SL@B innovators through an online quantitative survey designed by the ESL@B team, and 5) cost data collected through an Excel-based costing tool from five SL@B TTS innovators to conduct cost-effectiveness analysis (CEA).[2] These data informed several reports presented to SL@B funding partners within the past year, including the *SL@B Portfolio Review and Funding Landscape Analysis*, the *Acceleration to Impact* thematic brief, *Summary of Key Qualitative Findings*, and the *Interim Synthesis Report*. The ESL@B team reviewed and synthesized these findings, in addition to incorporating new analyses, for this final report. The Duke University Campus Institutional Review Board (IRB) approved three separate protocols to cover all research related activities [IRB #2018-0370 (existing data), IRB #2018-0617 (interviews), and IRB #2019-0546 (quantitative survey)].

** At the time of writing this report, one award in Round 8 to Ona Kenya was still under negotiations, and so has been excluded from all analyses in this evaluation.*

For transparency, we note several research limitations. The evaluation was largely retrospective in nature, with an emphasis on analysis of existing data collected over the course of the program and a review of publicly available data. Primary data collection included an online survey for innovators, which is subject to missed data from those innovators who did not respond as well as self-report bias; however, our response rate of 54% is considered high for an online survey. Likewise, primary data collection via key informant interviews could have been subject to self-report bias; however, the sample size was high enough to reach data saturation (no new themes emerging) which lends strength to our reported findings. Furthermore, quantifying SL@B's impact on reducing mortality via cost-effective innovations at a portfolio level was not feasible due to the limitations of effectiveness data for early stage innovations and access to accurate cost data which was innovator-dependent. While CEA for the portfolio was not feasible, CEAs for four selected innovations are being conducted. Lastly, innovation as a concept is not clearly or consistently defined across data and literature sources, and there is limited evidence regarding time to impact or scale of global health innovations, adding difficulty in establishing clear benchmarks for impact metrics of the evaluation.

KEY FINDINGS

Putting SL@B in context, the program, totaling 77 million USD in innovator support alone* between 2011 and 2020 represents a small amount of funding within the reproductive, maternal, newborn and child health (RMNCH) space. Funding for RMNCH just in 2011, the year in which SL@B was launched, through official development assistance plus grants from the BMGF (ODA+) was 12.2 billion USD, which increased to nearly 16 billion USD in 2017, the latest year for which funding information is available.[3,4] The global MNCH space within which SL@B operates is covered by broader cross-sector innovation funding as well as MNCH-specific funding. The SL@B program's focus on newborns is a distinguishing feature in the field. Because this is relatively rare, the ESL@B team examined the wider space of innovation funding for MNCH.

Below is a summary of the key findings for the first two evaluation questions, which have significant overlap.

1. **How does SL@B map onto the global landscape of MNH innovation?**
2. **Does SL@B fill a gap in MNH innovation funding?**

Broadly speaking, SL@B tended to fund more early-stage and product-based innovations, which historically mapped the program as a unique player within the MNH innovation landscape. While the funding landscape for MNH has changed significantly since the program's inception in 2011, SL@B continues to fill a funding gap as one of the few open-call programs that funds through innovation growth stages and offers value-added technical support.

i. Innovations funded by the SL@B program target 80% of the most common causes of newborn death and 60% of the most common causes of maternal death.

ii. Compared to a study sample of 227 funded MNCH programs across 32 funders, the SL@B program was more likely to fund product and technology innovations. The majority of SL@B awards went to product-based innovations (61%), with the remainder going to service delivery approaches (16%), drugs and vaccines (12%), and mHealth solutions (11%). In interviews, some MNH experts shared a concern that this focus on product and technology innovations creates a risk of developing a portfolio of standalone devices instead of integrated solutions. Interview data also note that the SL@B program should leverage its unique convening power to bring product-based innovations into the fold of integrated health systems.

iii. The SL@B program appears to fund a greater proportion of early-stage innovations than most other MNCH funders. Most SL@B awards (86%) have gone to innovations in the first three stages of growth (ideation, research and development, and proof of concept), helping to fill a critical funding gap in the early-middle growth stages. Interviews with MNH experts indicate that SL@B's focus on early growth stages has provided an opportunity to test ideas and produce viable solutions that otherwise would likely not exist.

iv. Analysis of the private equity and venture capital investment landscapes for MNH in Kenya and India (two of the most common target countries for SL@B innovations) indicate this field has dramatically changed since the launch of SL@B in 2011, with increased attention to MNH and willingness to invest in these markets.

** Between 2011 and 2019, the SL@B partnership invested 77 million USD in direct innovator support, making up the bulk of the partnership funds. This does not include investments towards other non-financial support provided to innovators such as the DevelopmentXChange meetings (travel, conference fees, logistics, etc.), Xcelerator support to innovators, SL@B application, review, and selection processes, grants administration, communications and IT support, etc.*

i. Interviews with MNH experts indicate that SL@B's open-call approach has fostered interdisciplinary collaborations, setting it apart from other MNCH funders, including the individual agencies of the SL@B partnership. Data from the SL@B innovator survey indicate that the open call may also attract teams that include members outside of the health field to MNH innovation.

ii. Despite the open-call approach, the SL@B review and selection process has tended to fund a higher proportion of innovations originating in high-income countries (HIC) (83%) than low and middle-income countries (LMIC) (17%). Of the innovations from HIC-based organizations, 5% have LMIC-based country offices as SL@B's prime recipient. No known portfolio balance or target ratio for the SL@B portfolio of funded innovations was established. Interview data with MNH experts suggest that a more balanced LMIC:HIC ratio would be ideal. Interviewees noted that solutions designed by LMIC-based teams may be more likely to be viable, sustainable, and cost-effective.

iii. The non-financial support provided by the SL@B program (e.g. Xcelerator workshops,* and targeted connections made by grant managers) is highly valued by innovators, and distinct in the field of MNH innovation funding.

Key findings for questions three and four are presented together, as they also have significant overlap.

3. **What has been the impact of SL@B on sourcing and scaling MNH innovations between 2011 and 2020?**
4. **What is the potential impact of SL@B-funded innovations on MNH mortality and the MNH ecosystem?**

While it is premature for most of these early-stage SL@B innovations to have had a significant impact on global MNH mortality rates, SL@B has been able to source and support innovations toward market entry and position for scale via both financial and non-financial technical support and transformative partnerships.

i. Expert interviews demonstrate that the SL@B program is seen as a major driver of innovation and a critical convening platform of both development organizations and a community of innovators. Further, the sourcing strategy has brought in several innovators who are first-time entrants to the MNH arena, proposing novel solutions to address maternal and newborn mortality.

ii. Interview data indicate that the SL@B program has leveraged both public and private sectors to increase attention to (and funding for) MNH innovations. Through SL@B's convening power and networks, the program has catalyzed multi-sectoral collaborations and partnerships for several high-impact innovations that are progressing towards scale, thus improving their path to sustainability even as their SL@B funding period ends.

iii. It is difficult to assess SL@B's potential impact on maternal and newborn mortality, given the early growth stages funded in the SL@B program. Many SL@B innovators are not yet scaling but are still working towards market entry. Of respondents to the SL@B innovator survey, only 28% are operating in at least one market and 15% are operating in at least two markets globally. Longer timeframes are needed for an assessment of the program's potential impact on mortality.

iv. Preliminary data from the CEA indicate that grantees with TTS SL@B awards are interested in having cost-effective analyses of their innovations in order to leverage further funding to scale. The SL@B program has sourced and scaled some cost-effective innovations; however, impact estimates for most grantees are premature given their early stage of growth (and evidence level) in the scaling pathway.

v. Diverse stakeholders value SL@B's early-stage funding to establish proof-of-concept and the program's intentional approach to progressively fund an innovation through growth stages in order to support a scaling pathway.

vi. The SL@B program appears to accelerate progress through key milestones and growth stages: innovators on average moved through growth stages more quickly during their SL@B funding period than innovators in the same growth stages either before or after their SL@B funding period.

vii. Survey data show that innovators credit SL@B's financial and grants management support (e.g. regular check-ins with SL@B program officers, capacity building workshops, connections) with accelerating their trajectory. Specifically, innovators credit SL@B's financial support with accelerating the achievement of several key milestones, including validation studies (90%), prototype/program development (89%), and usability studies (88%).

** The Xcelerator program is a key element of the non-financial support provided by the SL@B partnership through VentureWell since 2012 (and Duke University in 2018 and 2019) to provide training and capacity building to SL@B innovators to develop and scale their innovation.*

viii. Interviews with innovators identified several non-financial SL@B supports that innovators credit with accelerating their growth, including the push to think about scaling plans early, having SL@B as a 'champion' to attract new funding/partners, introductions to commercialization and implementation partners via the DevelopmentXChange (DevX),* creating a peer network of innovators, and opportunities to participate in Xcelerator workshops and mentorship meetings.

ix. The non-financial supports rated as most helpful by respondents to the SL@B innovator survey include the Xcelerator workshops, the DevX events, and pitch support. Interview data indicate that the SL@B program could expand the non-financial scope of support to be even more proactive about facilitating partnerships that support scaling, including those with private sector organizations, national and sub-national public sector health organizations, and organizations with local expertise.

TOP RECOMMENDATIONS FOR MOVING FORWARD

Each section of this report includes recommendations pertaining to specific thematic areas within the evaluation. The ESL@B team has further distilled and synthesized these data-driven recommendations into those of highest priority for overall program improvement.

Define more precisely and publicly SL@B's program goals, strategy and success metrics over time for funded innovations at both the grantee and portfolio levels.

i. *Revisit and revise the SL@B Theory of Change (TOC)* to update and more clearly define program goals and measurable indicators of success, and use the TOC to align expectations and priorities across SL@B partners. Donor perspectives evolve over time and an agreed-upon TOC will support long-term planning, investment strategies, and stronger impact metrics.

   a. A key issue for SL@B funding partners to specifically address is the tension between addressing the most pressing health needs, and scalability and sustainability of innovations. Some of the greatest needs in MNH are in settings (e.g., fragile states) and among populations (e.g., low-income and vulnerable populations) where innovations may have transformative impact but would be unlikely to be financially sustainable without long-term public sector and/or donor funding. In contrast, innovations that have the highest potential to be scaled sustainably, may be more likely to prioritize customers or beneficiaries in higher wealth quintiles and operate in more stable (and prosperous) environments. The SL@B program (and other global health innovation programs) can have the most impact by developing clear expectations and targets, at both individual grant and portfolio levels, for health impact, scalability, and sustainability. These important decisions will influence SL@B's priority markets and the types/stages of innovations sourced.

ii. *Capture better data prospectively* at innovation and portfolio levels over time with clear indicators for outputs and outcomes for each growth stage. Having better data would enhance the ability to benchmark and measure pathways and timelines for milestones, better understand program successes and challenges over time, and facilitate continued adaptive program implementation and learnings. This approach could also help influence the broader MNH and global health innovation fields and lead to stronger data and evidence for innovation beyond the SL@B program.

iii. *Set and manage stakeholders' expectations* including innovators, external partners, and internal stakeholders about program goals, timelines, target success rates, and potential for sustainability by different types for innovations trying to scale in LMICs.

   a. Set realistic metrics for three to five years for early-stage innovations, including those that could be transformative, which are unlikely to include mortality reduction as a primary outcome. The unifying theme of "saving lives at birth" is powerful in setting an aspirational vision, but may also unintentionally set unrealistic expectations about what is feasible or achievable in the short to intermediate term for an innovation program.

   b. Establish success metrics and clear and quantified risk tolerance guidelines grounded in realistic understandings of timelines and failure rates for innovations to facilitate alignment among stakeholders.

** The DevelopmentXChange (DevX) is an annual event organized by the SL@B partnership every year since 2011. It has been traditionally held at USAID headquarters in Washington, D.C. and attended by SL@B innovators, SL@B finalists, and potential scaling partners for SL@B innovations.*

2. Strengthen proactive engagement and buy-in of public and private sector stakeholders in targeted LMICs to prioritize MNH challenges, co-design innovations, co-select innovations, and support scaling of integrated solutions into specific country contexts.

i. As SL@B considers its geographic prioritization, collaborations with national and sub-national public and private sector stakeholders are important to ***identify current MNH gaps and opportunities for improvement***, as well as garner support and co-lead programs.
   a. Engage local ministries early, jointly determine priorities, and curate validated innovations that can be scaled in different countries based on need.
   b. Build on this LMIC engagement to increase in-country support for target markets, to help innovators better understand the context, get real-time insights on the ecosystem, and make targeted connections.

ii. ***Strengthen demand-driven innovation sourcing*** combined with the open call approach to source diverse innovations and ideas, so that SL@B can build on its strengths and increase its impact in key LMICs.

iii. ***Give some precedence to LMIC-based innovators*** while strengthening their capacity to implement and scale innovations to re-balance HIC-driven SL@B solutions and to address the issue of sustainably scaling integrated solutions. Achieving stronger local innovation capacity in LMICs would be a positive outcome for the SL@B program to complement the direct impact of the innovations funded.

iv. ***Convene an integrated marketplace*** for innovations at the LMIC country or regional level with local stewardship and ownership of the platform.
   a. SL@B's open call approach could include supplemental targeted calls based on regional priorities and needs.
   b. Convening a regional marketplace would provide an opportunity for increased visibility for the SL@B program and for countries to select the most impactful innovations for their context.

3. Address continued gaps beyond current SL@B program to support sustainable scaled innovations

i. ***Recognize the continued gap*** between exit from the SL@B program and actual scale. The SL@B program currently serves innovations up to a certain point (TTS being the most advanced stage), but even most successful TTS innovations will not be operating at scale at the end of their SL@B funding period. The SL@B program could address this issue in several ways, including:
   a. Developing an additional funding category for post-TTS.
   b. Building strong ecosystem partners in LMIC markets to take on innovations after exiting SL@B.
   c. Proactively facilitating hand-offs to other funders. Implementation programs supported by SL@B funding partners (including USAID, GCC, and BMGF) could become natural handoff partners.

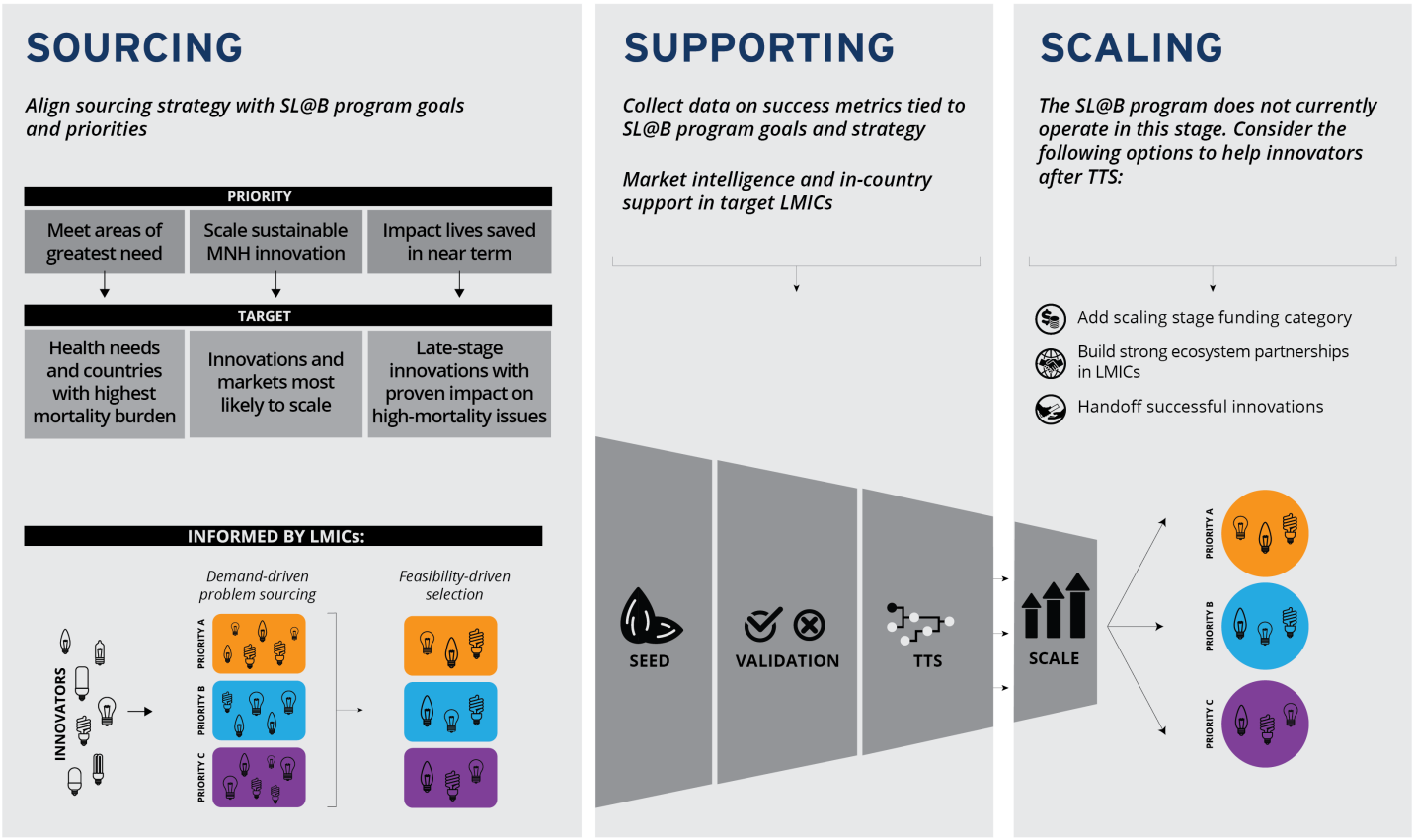
ii. ***Leverage existing and growing networks*** and platforms such as Every Woman Every Child (EWEC) and Partnership for Maternal, Newborn and Child Health (PMNCH), as well as the growing number of funders for MNH innovation. Doing so would offer SL@B a significant opportunity to strengthen its approach to later-stage growth and scaling beyond its current approach through TTS funding and support.

iii. ***Facilitate integration of promising innovations.*** This is a key step in improving the scale and adoption of innovations especially in target LMICs. Innovations are more likely to be used when combined with other successful interventions or existing workflows. The SL@B program has been supportive of these efforts, but creating clear pathways and provisions for innovations to gain acceptability, and be adopted or integrated in health systems will help accelerate time to scale in target countries. Scaling requires alignment across regional, national, and subnational policies, strengthening of sustainable financing, building of appropriate health system capabilities and competencies, and the deployment at scale of multiple complementary innovations that address complex health challenges. The scaling journey is exceedingly difficult for innovators to navigate, and a stronger program emphasis on active facilitation of integration and scaling could be a differentiated value for SL@B or other programs.

Figure 1. Recommendations for SL@B from the Program Evaluation

TOP THREE RECOMMENDATIONS:

- Define more precisely and publicly the key SL@B program goals, strategy, and success metrics over time.
- Strengthen proactive engagement and buy-in of public and private sector stakeholders in priority LMICs.
- Address continued gaps beyond current SL@B program support in order for innovations to scale sustainably.



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