SAVING LIVES AT BIRTH

Program Portfolio Review and Funding Landscape Analysis

JULY 2020

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GLOSSARY OF TERMS, ABBREVIATIONS, AND ACRONYMS

BD	Becton Dickinson
BMGF	Bill and Melinda Gates Foundation
CAMTech	The Consortium for Affordable Medical Technologies
DFID	U.K. Department for International Development
DRC	Democratic Republic of Congo
GCC	Grand Challenges Canada
GSK	GlaxoSmithKline
HIC	High Income Countries
IDIA	International Development Innovation Alliance
IFC	International Finance Corporation
KMET	Kisumu Medical and Education Trust
KOICA	Korea International Cooperation Agency
LMIC	Low- and Middle-Income Countries
mHealth	Mobile Health
MNCH	Maternal Newborn and Child Health
MNH	Maternal and Newborn Health
NGO	Nongovernment Organization
NORAD	Norwegian Agency for Development Cooperation
OPIC	Overseas Private Investment Corporation
R&D	Research and development
RMNCH	Reproductive, Maternal, Newborn, and Child Health
SL@B	Saving Lives at Birth
TTS	Transition to Scale
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

CONTEXT

This report summarizes findings from the Saving Lives at Birth (SL@B) *Portfolio Review and Funding Landscape Analysis*, conducted from May to October 2018. The SL@B funding partnership commissioned this study, as part of a broader evaluation of the SL@B program. The purpose of this report is to describe the SL@B portfolio over time, to examine how it fits within the larger funding landscape, and to better understand the role of the SL@B program in supporting maternal and newborn health (MNH) innovation.

Please see the report, "Evaluating Saving Lives at Birth: Evaluation Report, Rounds One to Eight (2011-2020)," published by Duke University, for the full comprehensive evaluation of the SL@B program. The full evaluation report draws on the analysis presented here as well as additional sources of qualitative and quantitative data to provide a robust evaluation of and recommendations for the SL@B program.

METHODS

This study draws on three key data sources:

1. Program data on the SL@B grantee portfolio (rounds 1-8), provided by USAID and GCC and validated by the research team,
2. Extensive desk research and review of the MNH funding landscape, including a dataset developed by the research team of publicly available information on a sample of 227 maternal, newborn, and child health (MNCH) programs and 32 key funders between 2011 and 2018, and
3. Twenty five semi-structured interviews with MNCH funders and innovators.

The team developed and implemented an analysis framework for both the portfolio and landscape research, including analysis of the SL@B portfolio and MNCH projects supported by other funders, across key variables of interest, and thematic analysis of interviews conducted with grantees and stakeholders in the funding landscape.

RESULTS

Portfolio Review

Organization type: Since 2011, the SL@B program has funded a diverse range of organization types through the eight funding rounds. The bulk of the portfolio is made up of academic institutions (N=60) and nonprofits (N=57), representing approximately 80 percent of all SL@B innovations funded between rounds 1 and 8. The remainder, a fifth of all SL@B awards, were made to for-profit organizations (N=27) and public international organizations (N=3).

Stage of development: Overall, SL@B funding has focused on the early stages of development, with 84 percent of awards made to innovations in the research and development (R&D, N=66), and proof-of-concept (N=57) stages. However, in rounds 7 and 8, the proportion of awards going to innovations in the transition-to-scale stage were purposefully increased, with all of the innovations in round 8 (N=3) in the transition to scale stage.

Type of innovation: The SL@B program has established a strong focus on products, including devices and diagnostics. Across the eight rounds of SL@B, the majority of awards went to product innovations (61 percent, N=89). Practice and approach innovations received 16 percent of awards (N=24). Innovations primarily classed as drugs/vaccines (N=18), and mHealth (N=16) are evenly represented, each making up about ten percent of the awards made.

LMIC vs. HIC innovation teams: The SL@B open call, review, and selection process has resulted in a higher proportion of innovations originating in high-income countries (HICs). Between rounds 1 and 8, only 17 percent (N=25) of awards went to organizations with headquarters based in low- and middle-income countries (LMICs), accounting for 19 percent of the total funding (14.4M USD).*

* Using World Bank classifications: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519

Targeting countries with the greatest burden of maternal and neonatal mortality: The SL@B portfolio targets many, but not all countries with the highest maternal and newborn deaths, when measured in absolute numbers. However, there is very little overlap between countries with the highest maternal mortality ratios and newborn mortality rates and those countries targeted for implementation by SL@B-funded innovations. The discrepancy between countries targeted by SL@B-funded innovations and countries with the highest maternal and newborn mortality burden (in terms of rates and ratios) may point to the tension inherent in balancing the concomitant program goals of meeting areas of greatest need and prioritizing sustainable, scalable solutions. Countries with the highest rates of maternal and newborn mortality may lack the capacity to support market-based solutions and applicants may find it more challenging to make a case for post-SL@B sustainability in those countries, as required in the proposal.

MNCH Funding Landscape Analysis

Organization type: Among the 32 key funders of MNCH innovations/programs reviewed for this study, most have diverse portfolios with regard to type of organization, including non-profits, for-profits, and academic organizations. Regarding the factors that funders consider when sourcing and selecting grantees, type of organization emerged as less important than potential for impact and mission alignment.

Stage of development: Funders included in this study either fund across the growth spectrum (from ideation through scaling) or focus on the later growth stages.

Geography: Most funders source across multiple geographic regions, while a few formally target specific countries or a region, including where they have stronger partnerships or believe there is untapped potential.

Sourcing strategies: Many funders in this study identify and source innovations through word-of-mouth and on-the-ground networks, even if they also put out calls for proposals for specific focus areas at times.

Role of SL@B in the wider funding landscape: The SL@B portfolio is distinct from the wider funding landscape in both types of innovations and stages of growth. Compared to other funders, the SL@B program is more likely to fund product innovations (such as diagnostics and devices) and far less likely to fund process innovations (such as practice/approach or health system support). SL@B also funds a much higher proportion of early-stage innovations than the funder sample as a whole, providing valuable early-stage support to MNH innovations.

Grantee support: The SL@B program stands out from the wider field with the non-financial support offered to grantees. In particular, SL@B's accelerator program and the focus on the scaling process stands out in this landscape.

GAPS IN THE WIDER FUNDING LANDSCAPE FOR SOURCING AND SCALING MNCH INNOVATIONS

1. **Less support for early-middle growth stages.**
Innovations face a "valley of death" in these middle stages of growth for establishing proof-of-concept and transitioning to scale (including initial market entry), as there are not as many funders targeting these stages of the growth trajectory.

2. **Gaps in communication skills mean the best ideas do not always rise to the top.**
Innovator teams often lack the written and oral communication skills needed to attract funding, regardless of the quality of their project. This skill gap may mean that high-promise innovations are being overlooked by competitive funding processes that privilege grant writing and pitching skills.

3. **Lack of effective engagement with the public sector to drive scale.**
While both funders and innovators view governments as a key partner in the scaling pathway, few believe they are successful at engaging the public sector.

4. **Weak peer and pipeline networks.**
A lack of coordination among funders leads to missed opportunities throughout the funding pipeline. Importantly, both funders and innovators identified a need for better communication and improved collaboration with their peers.

RECOMMENDATIONS FOR THE SL@B PROGRAM

1. **Match innovation growth stage(s) to strategic aims of the program.**
Any analysis of whether SL@B is targeting the right stages of innovation must be grounded in the goals of the investment, tolerance for risk, and time horizon for impact. An early-stage focus prioritizes seeding new innovations and groundbreaking ideas, while a later-stage focus is more likely to yield impact in terms of lives saved in the near term (5 to 10 years). Taking a portfolio approach can provide a balance between early-stage discovery and late-stage scaling. Distribution of early- and late-stage innovations across the portfolio should be determined prior to selection and different metrics of impact and success should be applied to the early-stage versus late-stage investments.

2. **Develop capacity of LMIC innovator teams to pitch their projects.**
To develop the capacity of promising innovation teams in LMICs to compete for funding, the SL@B program could fund workshops, peer learning mechanisms, and technical assistance in target countries to improve pitching and grant writing skills.

3. **Build partnerships between HIC and LMIC innovation teams.**
SL@B could fund a partnership model in which LMIC-based PIs lead the project, with technical assistance and support from HIC partners and colleagues. LMIC and HIC partners could learn from each other, leveraging their relative strengths in research and development, market knowledge, and networks of local and global partners. Anchoring project leadership in the target market may lead to stronger local ownership, easier market entry, and long-term sustainability of the innovation on the whole.

4. **Drive public sector engagement in key markets.**
The SL@B program has notably had success with public sector engagement and many SL@B grantees are partnering with or plan to partner with public health systems. As a large consortium representing both public and private funding organizations, SL@B funding partners could draw on lessons learned from these successes while creating opportunities for even greater impact by developing a public sector engagement strategy to identify opportunities for stronger government partnerships. This strategy could initially focus on developing mechanisms to facilitate innovator/ government interactions and potential scale-up collaborations in key markets.

5. **Strengthen funder networks and collaborations.**
The SL@B funding team, already representing six global funders, could act as a convener to raise the profile of MNH innovation and to increase opportunities for strategic collaborations and partnerships within this field. In particular, SL@B could begin by focusing on potential pipeline partners to facilitate smooth and effective handoffs of high-promise innovations.

INTRODUCTION AND BACKGROUND

THE SAVING LIVES AT BIRTH PROGRAM

The Saving Lives at Birth (SL@B) program brings together USAID, Grand Challenges Canada (GCC), the Norwegian Agency for Development Cooperation (NORAD), the Bill and Melinda Gates Foundation, U.K. Department for International Development (DFID), and Korea International Cooperation Agency (KOICA), to create a global partnership in the form of a grand challenge that supports innovations early in development. Together, these contributing partners are working to fill in gaps in maternal and newborn health (MNH) and alleviate the global burden of maternal and newborn deaths, while sourcing high-impact innovations in three main domains: (1) technology; (2) service delivery; and (3) "demand side" innovation that empowers pregnant women and their families to practice healthy behaviors and be aware of and access health care during pregnancy, childbirth, and the early postnatal period, especially the first 2 days after birth.[1] While the program includes reproductive, maternal, newborn, and child health (RMNCH) projects, the term MNH will be used throughout with reference to the SL@B program portfolio in this report, in keeping with the primary program focus on pregnancy, childbirth, and the first two days after birth. When referring to the larger funding landscape, however, this report will use the term maternal, newborn, and child health (MNCH) because most funders included the broader child health field and did not limit to newborns.

> Primary focus of the SL@B program:
> (1) technology
> (2) service delivery
> (3) "demand side" innovation that empowers pregnant women and their families to practice healthy behaviors and be aware of and access health care during pregnancy, childbirth, and the early postnatal period, especially the first 2 days after birth.

There have been eight rounds of grantee selection since the program's conception in 2011 and the data included in this brief detail funding disbursements for all eight rounds, from 2011 to 2019. Collectively, the first eight rounds of the SL@B program have supported a total of 116 innovative tools and approaches through 147 funding awards.

SL@B funding is funneled through different types of awards that target innovation growth stages. From round 1 to round 3, SL@B awarded two types of grants: seed funds (~250K USD) and transition-to-scale funds (~$2M USD). As defined by USAID,[1] seed funds support the development and initial testing of ideas, while transition-to-scale funds develop, refine, and rigorously test the impact of integrated solutions that have previously measured promising health outcomes in a controlled or limited setting and have the potential to credibly scale to market in multiple countries.

In 2014, during the review and selection of round 4 finalists, the program convened a Steering Committee and Working group, as well as garnered feedback from SL@B grantees at the DevelopmentXChange event, to assess and map the way forward for SL@B. The resulting SL@B 2.0 renewed its commitment to source and accelerate innovations that address maternal and newborn health. An important goal of SL@B 2.0 was to provide staged financing more tailored to the growth stage of an innovation. Accordingly, SL@B 2.0 introduced validation funds (~$250K USD) for innovations to support proof of concept through field testing and validation, and clinical trials.

SCALING INNOVATIONS FROM IDEA TO MARKET

A review of the literature demonstrates the complexity of moving health innovations along the pipeline from concept to market, even in high-income settings. While it is important to note that evidence on scaling timelines and milestones is scarce, the existing literature demonstrates that timelines for early innovations depend on the type of innovation and the target market. Based on findings in literature published between 2000 and 2008, medical devices in the US market take about 8 years on average to move from concept to regulatory approval and subsequently to market,[2] clinical practice innovations take approximately 17 years to move from publication of evidence to implementation,[3] and drug development can take 24 years to develop from initial discovery to demonstration of effectiveness.[4] The timelines for market entry and scale in low- and middle-income countries (LMICs) are even longer, due to many factors including, but not limited to, health system constraints, lack of infrastructure, and market availability.[5,6]

Given the relatively long timelines to implementation and impact faced by healthcare innovations, metrics and milestones that can help to predict scaling in early-stage innovations are critical for innovators and their funders. The literature on scaling suggests a number of useful early-stage metrics for predicting success, including:

a. The innovation is affordable and cost-effective for the target market
b. There is a clear fit and relevance for the target market
c. This innovation is aligned to and/or can be integrated with government programs
d. Regulatory approval and/or accreditation is achieved in target markets
e. The innovation is adaptable to multiple geographies
f. The innovation model is data driven (incorporates data to iterate, builds evidence base)
g. There are strong local partnerships, including distribution networks
h. Partner roles are clearly defined
i. Project success and failure (pivot) metrics are clearly defined.

While not an extensive list, previous studies have found these metrics to be indicative of later success.[7–9]

GOALS OF THIS ANALYSIS

To better understand the role of the SL@B program in supporting MNH innovation, this brief takes a close look at the SL@B portfolio over time and how it fits within the larger funding landscape. The analysis and findings are organized by key questions and divided into two distinct but complementary sections: the SL@B portfolio review and the funding landscape analysis.

The **portfolio review** addresses questions revolving around the composition of the SL@B grantee portfolio: what are the current innovation types, stages of growth, and geographies targeted by the SL@B program. Meanwhile, the **funding landscape analysis** is designed to better understand major players and trends in maternal newborn and child health (MNCH) innovation funding, how the SL@B portfolio compares to the larger landscape in terms of health priorities and stages of growth, and the role played by the SL@B program within this field. Specific goals of this analysis include identifying the major sources of funding for innovative MNCH programs and organizations in LMICs, assessing the role played by the SL@B program in meeting funding needs in this field, and determining whether there are remaining gaps in the funding landscape for MNCH innovation.

Taken together, findings from the portfolio review and the funding analysis provide insight into the value of the SL@B program in funding MNH innovations globally and form the basis of recommendations for SL@B or similar future programs.

The SL@B funding partnership commissioned this study, as part of a broader evaluation of the SL@B program. Please see the report, "Evaluating Saving Lives at Birth: Evaluation Report, Rounds One to Eight (2011-2020)," published by Duke University, for the full detailed evaluation of SL@B program overall. The full evaluation report draws on the analysis presented here as well as additional sources of qualitative and quantitative data to provide a robust evaluation of and recommendations for the SL@B program.

DATA AND METHODOLOGY

This study draws on three key data sources:

1. **Program data on the SL@B grantee portfolio** (rounds 1-8), provided by USAID and GCC and validated by the research team,
2. **Extensive desk research and review of the MNH funding landscape**, including a dataset developed by the research team of publicly available information on a sample of 227 MNCH programs from 32 key funders between 2011 and 2018, and
3. **Twenty five semi-structured interviews with MNCH funders and innovators**.

The research team began by identifying key SL@B grantee characteristics and developing a data matrix for SL@B grantees. The team then completed data entry and validation for grantees in funding rounds 1-7, with program data provided by USAID and GCC. The team developed and implemented an analysis framework for both the portfolio and landscape research, which was shared with USAID and GCC for feedback before the team finalized the approach. Early analysis from this review was shared with the SL@B funding partners in May 2018. Data for awards made in round 8 were added to the analysis in late 2019.

The sample of 32 MNCH funders for desk research was selected with input from USAID. Selection criteria included funders who had funded at least one MNCH innovation between 2011 and 2018 and focused on three types of funders: philanthropic, investment (debt and equity), and development aid organizations that fund individual organizations. In addition to research on the funders, the research team conducted additional desk research of a sample of 227 projects supported by these funders, developing a matrix of these projects using key characteristics from the SL@B portfolio review framework. Early analysis of these data was shared with the SL@B funding partners in June 2018.

The team conducted a total of 25 semi-structured interviews with 12 funders, including nine from the desk research sample. The team also conducted semi-structured interviews with one intermediary organization (providing non-funding support to MNH innovations), nine SL@B awardees, and three non-SL@B-funded MNH innovators. The subsequent interview data was analyzed to identify key themes in funding priorities, approaches to sourcing, and levels of financial and non-financial support provided to grantees.

The results from the funding landscape analysis were then mapped against the findings from the SL@B portfolio review to identify gaps in the funding landscape and to provide insights into the role of the SL@B program in MNCH innovation funding globally. These findings were first shared with the SL@B funding partners in October 2018. Please see Appendices I and II for more detail on the study samples.

Categorizations

For the portfolio review and landscape analysis, innovation types were categorized into five areas, namely: 1) drugs and vaccines, 2) products (including nutrients and diagnostics), 3) mHealth (including digital health and eHealth), 4) practice and approach (including care delivery and behavior change), and 5) health systems support (including financing, workforce training, logistics, facilities renovation, and macro-level initiatives). The SL@B portfolio does not contain any innovations that are primarily classed in the health systems support category but this type was retained for the funding landscape analysis.

 devices and products

 drugs and vaccines

 health systems support

 mHealth

 practice and approach

The innovation types were selected based on frameworks used and tested by USAID and Duke University. In July 2018, the research team iterated the innovation type categorization used in the initial analyses (May and June 2018) based on additional input from USAID. While these categories are comprehensive, they are not mutually exclusive. For this analysis, the research team classed each innovation under one primary category for innovation type and growth stage, based on information provided in the funding proposal, though could very well fit into more than one at the same time. In particular, many innovations categorized as mHealth could also be considered practice/approach innovations. It is also important to note that some innovations may become more comprehensive offerings as they mature; for example, product innovations may be bundled within an innovative care delivery approach or health systems support model as they scale in markets.

As there is no consistently used framework or definitions of stages of growth in the literature, the research team initially applied the four growth stages used by the SL@B program: 1) development (research and development, protoyping), 2) validation (clinical trials, pilot and field testing, proof of concept), 3) early adoption (entry into the target market, demand generation), and 4) scaling (increasing impact in original and/or new markets). However, the International Development Innovation Alliance (IDIA) has recently developed a scaling stage process, defining six distinct stages: ideation, research and development, proof of concept, transition to scale, scaling, and sustainable scale.10 In consultation with the SL@B funding partners, the research team transitioned to the IDIA framework for the growth stages presented in this report. Figure 1 shows an approximate alignment between the different growth stage frameworks.

Figure 1. IDIA and SL@B growth stage frameworks

IDIA Scaling Stages	1. Ideation	2. Research & Development	3. Proof-of-Concept	4. Transition to Scale	5. Scaling	6. Sustainable Scale
	Define problem, scan landscape, develop initial ideas	Develop specific innovative solution	Field test innovation to assess potential	Refine model, develop partnerships to enter market	Replicate or adapt to increase impact	Wide-scale implementation sustained by ecosystem
Growth Stages Applied by SL@B	1. Development		2. Validation	3. Early Adotpion	4. Scaling	
	Research and development of initial idea, create prototype		Establish proof-of-concept, field testing, clinical trials	Entry into target market, demand generation	Increase impact in original and/or new markets	

Given the stated focus of the SL@B program on maternal and newborn health specifically, we use the term MNH when referring to the SL@B program and portfolio. The larger funding landscape, however, most commonly categorizes projects targeting pregnant women, newborns, and children together. When discussing the broader funding landscape, we use the term MNCH to indicate that the data are not exclusively MNH programs.

LIMITATIONS

In keeping with the scope of the project, the analysis was based on a sample of funders and MNCH projects and as such, does not include the full breadth of MNCH funding from 2011 to 2018. For funders with uniquely large portfolios in this area (e.g. the Bill and Melinda Gates Foundation, MacArthur Foundation), only a subset of projects was included in the project matrix. This was done to avoid drowning out other, smaller funders in the analysis and to allow a fuller picture of the players across the landscape. As a result, however, the analysis does not fully demonstrate the relative scope and influence of these larger funders on the landscape as a whole. Furthermore, this analysis largely excluded development aid funders, as this funding often goes directly to governments or to contractors working with governments and is not comparable with the SL@B program's target recipients. Development aid that went directly to grantees rather than to governments, however, was included from organizations such as GCC, DIV, OPIC, IFC, and NORAD.

The use of the term "innovation" is not well defined either in the research literature or among funders, and is applied inconsistently (and sometimes not at all) by funders of MNCH projects. Therefore, the scope of this analysis included funded MNCH projects that appear to be innovative in nature but are not necessarily identified as such.

It is also important to note that the matrix of 227 funded MNCH programs has significant gaps in data due to the limited nature of the publicly available data on these projects. In particular, stage of growth was often not provided and, when possible, this was defined by the Duke team using available project descriptions. Data on the amount of funding provided was also largely unavailable and as a result was not included as a variable in this review. The SL@B portfolio review depended largely on SL@B program data, including self-reported data from grantees.

PORTFOLIO REVIEW FINDINGS

## WHAT IS THE COMPOSITION OF THE SL@B GRANTEE PORTFOLIO?

For this analysis, we utilized frameworks to categorize grantees and innovations by organization type, innovation type, and stage of development. These frameworks represent categorization systems developed and tested over the years by Duke University, the SL@B program, and the IDIA, and were discussed and agreed on by the research team and the contracting officer. The categories in these frameworks are, of course, not mutually exclusive and grantees and innovations may fit within more than one category in each framework. For example, an innovation could be marked as mHealth and diagnostics. For the purposes of this analysis, however, we have classified each grantee and innovation within a primary category, while recognizing the fluid nature of these categories.

Organization type

Funded organizations are grouped into four primary types. Academic institutions include universities and other research institutions. Non-profit organizations is a broad category, including local non-profits and large international NGOs. For-profit organizations include all innovations housed within a commercial enterprise, though it is important to note that many of these enterprises are start-ups and not yet earning a profit. Finally, public international organizations include large multilateral entities like the World Health Organization.

Since 2011, the SL@B program has funded a diverse range of organization types through eight funding rounds. The bulk of the portfolio is made up of academic institutions (N=60) and non-profits (N=57), representing approximately 80 percent of all SL@B innovations funded between rounds 1 and 8. The remainder, a fifth of all SL@B awards, were made to for-profit organizations (N=27) and public international organizations (N= 3).

Figure 2: Number of innovations, by organization type
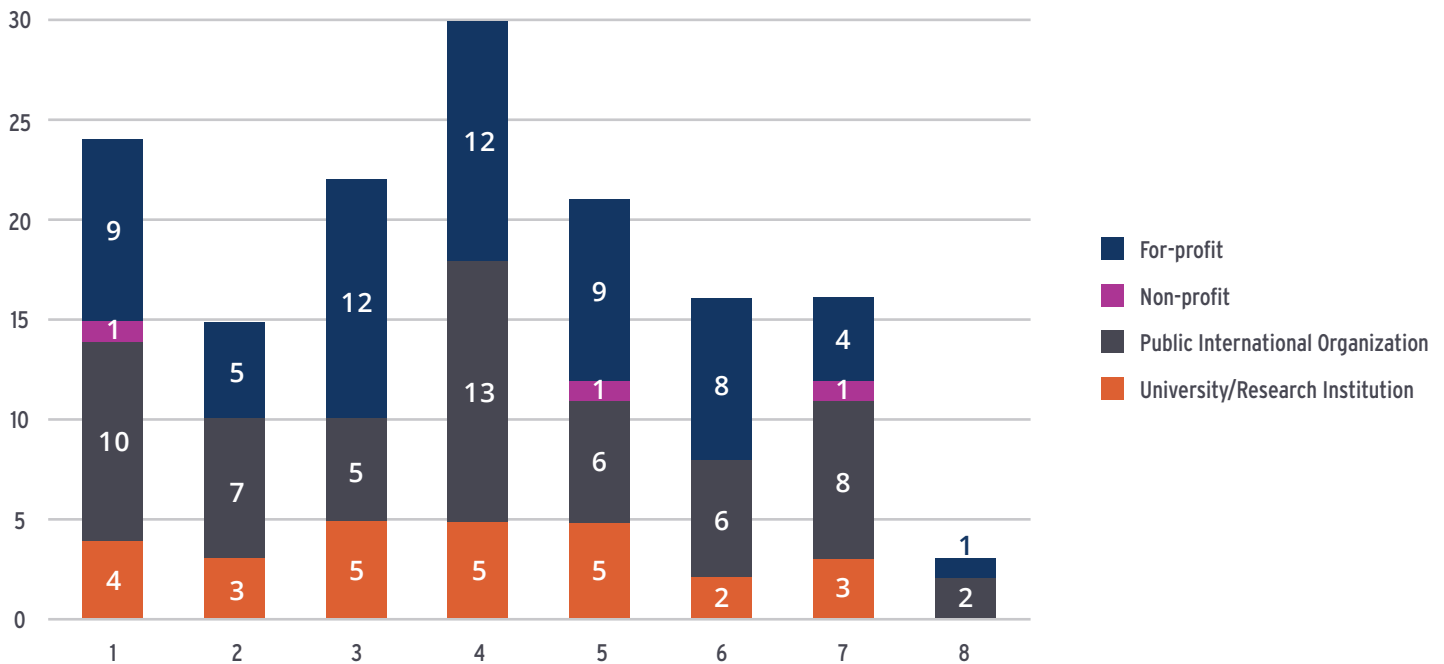
Source: SL@B program data from USAID and GCC, validated and analyzed by the authors

Stage of development

Though innovation growth is rarely a linear process, there are recognizable stages along the trajectory from initial concept to implementing at scale. For the purposes of this analysis, we used six stages of growth as defined by the IDIA. The research team assigned growth stages to each SL@B funded project, based on review of their primary activities at the time of application. As noted in the introduction, these stages are 1) ideation, 2) research and development 3) proof of concept 4) transition to scale, 5) scaling, and 6) sustainable scale.*

In terms of number of awards made by stage of development, SL@B funding has focused on the early stages of development, with 84 percent of awards made to innovations in the R&D (N=66), and proof-of-concept (N=57) stages. However, in rounds 7 and 8, the proportion of awards going to innovations in the transition-to-scale stage purposefully increased, with all of the innovations in round 8 (N=3) in the transition to scale stage.

Figure 3: Number of innovations, by stage of growth
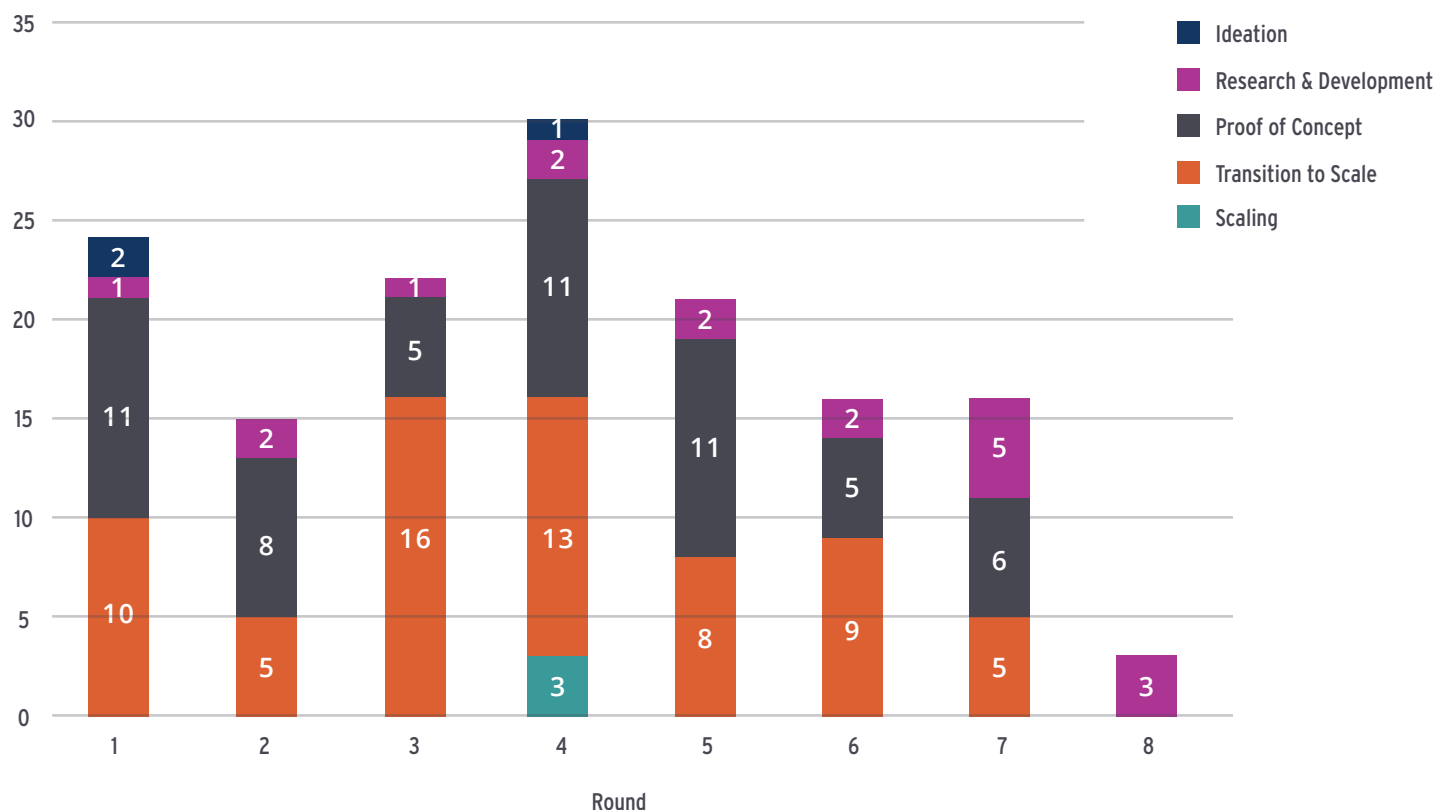
Source: Categorization conducted by the authors using SL@B program data from USAID and GCC

This breakdown is somewhat reflected in the type of grant awarded. Across the eight rounds, approximately 63 percent of the awards were seed (N=93), 19 percent were validation (N=28), and 18 percent were transition to scale (N=26). In rounds 1 through 4, SL@B awarded two types of grants: seed and transition to scale (TTS). The proportion of seed grants in this period varied between 80 and 88 percent, with TTS grants making up the remaining 12 to 20 percent. However, several of the TTS awardees in these earlier rounds were in actuality still working on proof-of-concept and were not ready for market entry.

Starting in round 5, the SL@B program introduced validation grants to distinguish purely development grants from those that are past the idea stage and ready to test a prototype or validate their model. After the introduction of validation grants, the proportion of TTS grants progressively increased, from 10 percent in round 5 to 31 percent in round 7, and then 100 percent in round 8. During this period, the proportion of seed grants decreased from 87 percent in round 4 to 25 percent in round 7 and zero in round 8.

* For definitions of each stage, please see: The International Development Innovation Alliance, *Good Practice Guides for Funders: Scaling Innovation* (June 2017).

Across the whole portfolio, seed grants represented almost two thirds of the innovations (64 percent), whereas validation grants represented nearly one fifth (18 percent) of all innovations in rounds 1 through 8, but were concentrated entirely in rounds 5 through 7. Conversely, round 8 innovations were all TTS awards, which was a pre-determined decision by the donors (though it is worth noting that round 8 consisted of only three awards finalized at the time of this report).

**Figure 4. Proportion of grant awards, by type of grant**
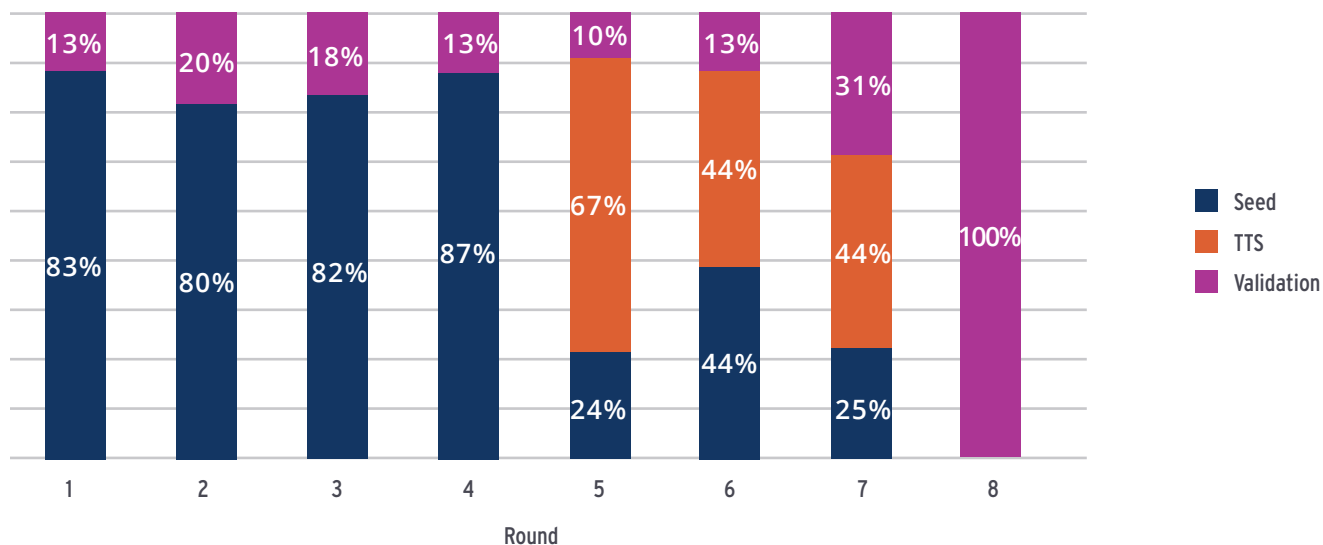
Source: SL@B program data from USAID and GCC, analyzed by the authors

In terms of the amount of funds disbursed, in the earlier rounds (rounds 1 through 4), seed awardees received between 40 and 60 percent of the total funds dispersed by round, with TTS awardees making up the rest. Thus, although TTS grantees made up less than 20 percent of innovations funded within each round, they received more than 50 percent of all funds disbursed in the first four rounds.

Subsequently, in rounds 5 through 8 (with the introduction of validation grants in round 5), about 29 percent of SL@B dollars went to seed awards, 28 percent to validation awards, and 43 percent to TTS awards.

> **RECOMMENDATION:** See **page 22** for recommendations on matching growth stage to program priorities

Figure 5. Proportion of funds disbursed, by type of grant
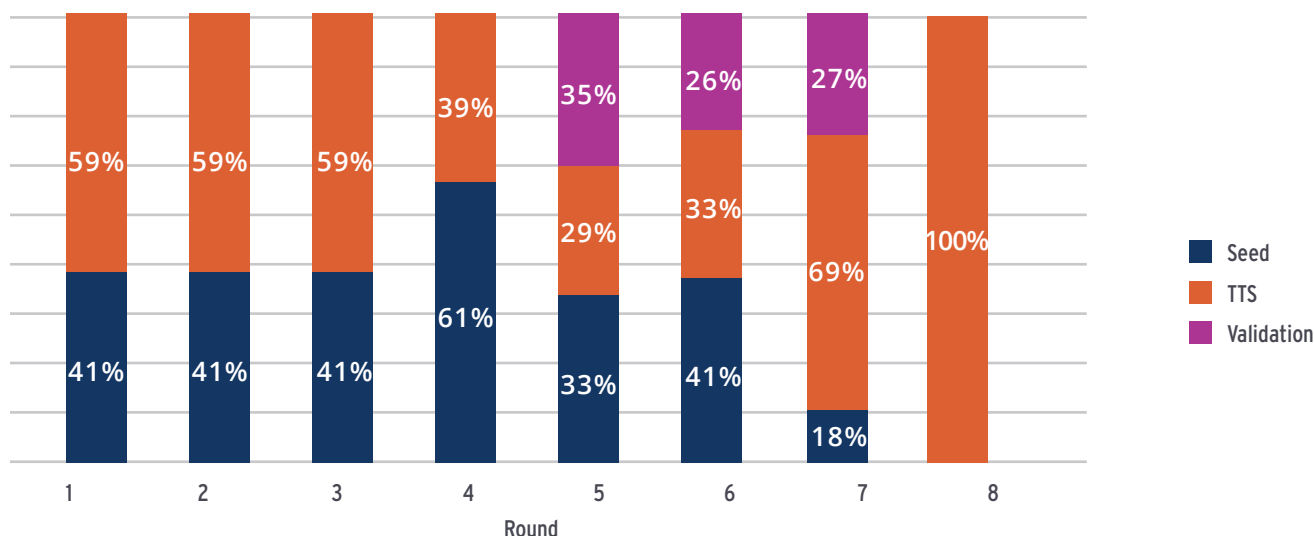
Source: SL@B program data from USAID and GCC, analyzed by the authors

Type of innovation

The SL@B program focuses on improving the health of newborns and pregnant and post-partum women through the funding of a diverse portfolio of innovation types. For this analysis, innovations are categorized into four primary types: 1) drugs and vaccines, 2) products (including nutrients and diagnostics), 3) mHealth (including digital health and eHealth), and 4) practice and approach (including care delivery and behavior change. It is important to note that many of the mHealth innovations focus on care delivery and behavior change and could also be categorized as practice and approach models.

The SL@B program has maintained a strong focus on products, including devices and diagnostics. Across the eight rounds of SL@B, the majority of awards went to **product innovations** (61 percent, N=89). **Practice and approach innovations** (excluding those categorized as mHealth) received 16 percent of awards (N=24). Innovations primarily classed as **drugs/vaccines** (N=18), and **mHealth** (N=16) are evenly represented, each making up about ten percent of the awards made. In round 1, mHealth innovations represented 25 percent of the first funding cohort, but the proportion has decreased since then, representing between 0 and 13 percent of the innovations selected in subsequent rounds.

While overall, the portfolio leans heavily toward technology- and product-based innovations, round 7 moved the portfolio even further in this direction with a cohort dominated by diagnostics and products (81 percent, N=13). While most previous rounds have included awardees across four or five different categories, round 7 innovations are concentrated in products with two awards to mHealth innovations and one award to a (non-mHealth) practice and approach innovation.

Figure 6: Number of innovations, by innovation type

Source: SL@B program data from USAID and GCC, validated and analyzed by the authors

WHICH GEOGRAPHIES DOES THE SL@B PROGRAM TARGET?

LMIC vs. HIC innovation teams

The SL@B open call, review, and selection process has tended to result in a higher proportion of innovations originating in high-income countries (HICs). Between rounds 1 and 8, only 17 percent of awards (N=25) went to organizations based in low- and middle-income countries (LMICs), accounting for 19 percent of the total funding awarded (14.4M USD).* The proportion of awards made in each round to organizations based in LMICs has ranged from a low of 6 percent in round 6 (N=1, 16 awards were made in that round) to a high of 33 percent in round 8 (N=1, only three awards were made in that round). The proportion of funding going to organizations based in LMICs has ranged from a low of 6 percent in round 6 (250,000 USD) to a high of 44 percent in round 7 (3.77M USD).

Awards to organizations headquartered in LMICs have a greater representation in practice and approach (38 percent) than in the portfolio as a whole (16 percent). The proportion of mHealth innovations is also higher among LMIC awardees (32 percent, versus 17 percent in the overall portfolio) while the proportion of product innovations is lower (48 percent, versus 61 percent in the overall portfolio). Of the SL@B awards for drug and vaccine innovations, only 6 percent went to organizations based in LMICs.

SL@B awards going to organizations headquartered in LMICs are also much more likely to support innovations at an advanced stage of development than an earlier stage. Of SL@B awards made to innovations in the R&D stage, only 8 percent were from LMICs, whereas among the transition to scale and scaling stages, 33 percent were from LMICs. Similarly, of the 26 TTS awards, 35 percent of them (N=9) were to innovations from LMICs, whereas 17 percent of seed and validation awards (N=20) went to innovations from LMICs. It is possible that the lower proportion of LMIC-based innovations within SL@B is linked to the focus on earlier stage and product and drug/vaccine innovations across the SL@B portfolio as a whole.

Local and national health researchers, providers, and innovators have substantial knowledge of both the pressing challenges and priorities in their health systems. In addition, they are aware of unique cultural, regulatory, and socioeconomic factors that affect healthcare in their countries. Although the SL@B partnership has recognized the need to attract innovations from LMICs, its ability to do so has been constrained by two main factors:

1. Local and national health organizations and research universities in LMICs often do not have the same level of capacity and resources to conduct basic research as their HIC counterparts. Addressing these upstream challenges involves considerable longer-term planning and funding to strengthen capacity for basic research in LMICs.

RECOMMENDATION: See **page 23** for recommendations on how the SL@B program can increase the proportion of LMIC-based innovations in the portfolio.

2. Organizations from LMICs also face challenges downstream as they may have more limited resources and expertise to write compelling proposals than their counterparts in HICs. Universities and large NGOs based in HICs typically have significant resources and support systems dedicated to proposal development for funding calls. Institutions and innovation teams based in LMICs that do not have the same support or experience will be at a disadvantage when applications are reviewed for their compelling problem definitions and solutions.

Targeting countries with the greatest burden of maternal and neonatal mortality

In 2010, just a year before the launch of the SL@B program, the three countries with the highest burden of maternal mortality (number of deaths) were India, Nigeria, and Democratic Republic of Congo (DRC). Those with the highest burden of neonatal mortality were India, Pakistan, and Nigeria. These four countries continue to bear the greatest burden of maternal and neonatal mortality even in 2017, though they have experienced reductions in the number of deaths over this period.[11,12]

The SL@B portfolio targets many, but not all countries with the highest maternal and newborn deaths, in terms of absolute numbers. The research team also examined the overlap between the countries with a high proportion of

proposed SL@B innovations and maternal mortality ratios and newborn mortality rates. However, there is very little overlap between countries with the greatest burden of maternal and newborn mortality rates and those countries targeted for implementation by SL@B-funded innovations. Panels A and B in Table 1 show representation of SL@B-funded innovations by countries with the highest maternal mortality ratios and newborn mortality rates and those with the highest absolute number of maternal and newborn deaths.

Table 1: Top 25 Countries with Highest Burden of Maternal Mortality Ratios and Newborn Mortality Rates and Maternal Deaths, and Newborn Deaths, Compared to Number of SL@B Innovations Targeting those Countries

Panel A: Top 25 Countries by Maternal Mortality Ratios and Newborn Mortality Rates, Number of SL@B Grants[16,17] MMR per 100,000; NMR per 1,000 live births			
Country	MMR	NMR	Number of SL@B Grants
South Sudan	1,150	83	0
Chad	1,140	45	0
Sierra Leone	1,120	43	1
Nigeria	917	46	4
Somalia	829	80	0
Central African Republic	829	70	0
Mauritania	766	65	0
Guinea-Bissau	667	56	0
Liberia	661		1
Afghanistan	638	46	0
Côte d'Ivoire	617	42	0
Gambia	597	51	0
Guinea	576	41	0
Mali	562	41	1
Burundi	548		0
Lesotho	544	50	0
Cameroon	529		1
Tanzania	524		9
Niger	509		0
Eritrea	480		0
Haiti	480		0
DR Congo	473	42	1
Zimbabwe	458		0
Eswatini	437		0
Ethiopia	401		4
Comoros		73	0
Angola		55	0
Pakistan		52	6
Djibouti		52	0
Equatorial Guinea	51	0	
Botswana		50	0
Turkmenistan	49	0	
Micronesia		41	0
Kiribati		41	0
Yemen		39	0

Panel B: Top 25 Countries by Number of Maternal and Neonatal Deaths, Number of SL@B innovations [7]			
Country	Maternal Deaths	Newborn Deaths	Number of SL@B Grants
Nigeria	67,000	336,372	4
India	35,000	631,754	17
DR Congo	16,000	144,291	1
Ethiopia	14,000	124,323	4
Tanzania	11,000	57,118	9
Indonesia	8,600	74,921	1
Pakistan	8,300	309,419	6
Afghanistan	7,700	54,890	0
Chad	7,300		0
Uganda	6,000	42,158	13
Côte d'Ivoire	5,400	37,360	0
Bangladesh	5,100	59,954	10
Niger	5,100	38,845	0
Somalia	5,100	48,764	0
Kenya	5,000	38,579	29
China	4,900	90,359	1
Cameroon	4,700	30,246	1
South Sudan	4,500	31,832	0
Mali	4,400	31,943	1
Sudan	3,900	50,820	0
Mozambique	3,100	43,458	0
Angola	3,000	67,375	0
Sierra Leone	2,900		1
Madagascar	2,800		0
Ghana	2,700		11
Egypt		40,898	1
Philippines		38,680	1
Yemen		34,083	0
Myanmar		30,569	0

Source: Estimates from WHO, UNICEF, UNFPA, World Bank Group, and UN Population Division

It is important to note that the data above reflect which countries SL@B awardees intended to target with their innovation at the time of application; innovations that are still in R&D and proof-of-concept stages may change their target country before entering a market. However, the discrepancy between the countries that SL@B-funded innovations has tended to target (e.g. Kenya, Uganda, India) and countries with the highest maternal and neonatal mortality burden (especially in terms of rates and ratios) may point to a tension inherent in balancing the concomitant program goals of meeting areas of greatest need and also prioritizing sustainable and scalable solutions. Countries with relatively stronger innovation ecosystems, such as Kenya, Uganda, and India, are often better equipped to facilitate the testing and validation of innovations, as well as attract partners and investment to sustain the project post-SL@B funding. Conversely, those countries with the greatest rates of maternal and newborn mortality, such as South Sudan, Chad, and Somalia, may lack the capacity to support market-based solutions. Innovations targeting these countries would likely depend on a long-term donor funding model, and be unable to make a case for post-SL@B sustainability.

Other factors that may contribute to the discrepancy include reluctance to work in conflict/fragile states, the existing relationships of SL@B funding partners in countries where they already work, and HIC-based SL@B awardees' established connections on the ground in East Africa and India. That said, if the intention of SL@B is to move the needle on global maternal and newborn mortality rates, it will be important to consider how innovation can better serve the lowest resource and/or conflict and fragile settings too.

Which health areas does the SL@B program prioritize?

With regard to health priorities, the SL@B program has funded innovations that address the most common causes of maternal and neonatal morbidity and mortality, such as preterm birth, low birth weight, hypertension, preeclampsia, complications during labor, and postpartum hemorrhage. However, the majority of these innovations are in the research and development and proof-of-concept stages, a few are in the transition to scale stage, and even fewer are in the scaling stage. Although SL@B is seeding and supporting innovations to address specific causes of death, the impact of these innovations will not be known until the innovations have been validated, adopted, and scaled.

It is important to note that SL@B has strategically worked to address gaps in prevention and treatment for many of the leading causes of maternal and neonatal mortality and morbidity through an open call for applications in this space, broadly defined. Given the substantial burden of some of these diseases, however, it may be worthwhile for the SL@B program to consider a targeted approach that annually (or biannually) addresses big issues sequentially. Such an approach could lead to a greater number of proposals from LMICs, which experience the greatest burden of an identified cause, and therefore, a higher proportion of finalists from such countries in the eventual review and selection process. It could also have positive spillover effects in not only health outcomes, but also in workforce capacity and productivity.

FUNDING LANDSCAPE ANALYSIS

For the funding landscape analysis, the research sample included MNCH projects broadly defined, both given the inclusion of the RMNCH spectrum within SL@B and the difficulty inherent in separating out maternal and newborn projects from those focused on children. As defined in the introduction, this report uses MNH when referring specifically to the SL@B program portfolio and MNCH when referring to the larger funding landscape, to reflect the overall focus of each, with the understanding that both include projects across the wider spectrum of RMNCH.

Through a review of publicly available information and semi-structured interviews with both key funders and innovators, this analysis identifies several trends and gaps in the current landscape of funding for the types of innovation targeted by the SL@B program. Funders included in the desk research and interview samples were selected in consultation with the SL@B program funding partners. For more information on the study sample, please see Appendices I and II.

WHAT TYPES OF INNOVATIONS AND ORGANIZATIONS ARE OTHER FUNDERS TARGETING?

Funders in the MNCH field include those specifically targeting MNCH as well as others that may not target MNCH or health specifically but fund related projects through other themes, such as technology innovation. Similarly, some funders focus on innovation, while others fund a variety of MNCH projects, some of which may be classified as innovative. As noted in the limitations section, there is no clear definition of "innovation" used by funders. In this sample, we have focused on projects that appear to be innovative in nature, whether or not the funder has labeled them as such.

This analysis found that the approach of funders in MNCH can be described through five strategic priority areas: population focus (e.g. pregnant women), regional focus (e.g. East Africa), health verticals (e.g. RMNCAH, nutrition), health systems (e.g. focus on quality and access issues) and disease focus (e.g. sepsis). The funders in our study all used one or more of these approaches to source and select projects.

Type of organization
Most funders in this study have diverse portfolios with regard to type of organization, including non-profits, for-profits, and academic organizations. Some also fund governments, though this is not as common. Investment funders in our sample are less likely than philanthropic funders to source projects based in universities. Potential for impact and mission alignment emerged as more important factors than the type of organization for most funders.

Geography
Most funders source across multiple geographic regions, while a few formally target specific countries or a region. Other funders informally target certain regions where they have stronger partnerships or believe there is untapped potential. Most funders in this sample are open to funding teams headquartered in HICs as well as LMICs, provided the project targets LMIC populations.

Sourcing
The majority of funders interviewed for this study (9 of 13) identify and source innovations through word-of-mouth and on-the-ground networks, even if they also put out calls for proposals for specific focus areas. Relying on connections and networks serves two purposes for these funders: sourcing local innovations and partners in LMICs, and establishing long-term relationships on the ground. Despite this approach, some funders find it difficult to find local (LMIC) institutions and innovators who are a good fit for their funding program.

Mechanism

Grants were the most common funding mechanism in this study sample, representing 86 percent of the projects reviewed. Equity funding accounted for nearly 10 percent of projects, with debt and other types of investment making up the remaining projects and representing only a very small proportion of the sample overall.

Growth stage

Funders included in this study either fund stages along the growth spectrum or focus on the later growth stages. This sample did not include any funders that focus exclusively on early-stage innovation. Interviews with innovators revealed that a number of funders had provided them with early-stage support but many of these (including DFID, National Institutes of Health, National Sciences and Engineering Research Council, and the Wellcome Trust) are more likely to provide such support to innovations within large established institutions, such as universities, rather than start-ups. Further, our initial data suggests that this early-stage support may be more likely to fund HIC-based teams, rather than LMIC-based enterprises. Thus, LMIC-based social enterprises (for-profit and not-for-profit) may have fewer options for early-stage funding to support R&D and establish proof of concept.

WHAT ROLE DOES THE SL@B PROGRAM PLAY IN THE WIDER FUNDING LANDSCAPE?

Distinct portfolio by innovation type and stage of growth

The SL@B portfolio is distinct from the wider funding landscape in both type of innovation and stage of growth. Compared to the study sample of 227 funded MNCH programs across 32 other funders, the SL@B program is more likely to fund product innovations (such as diagnostics and devices) and far less likely to fund practice/approach or health system support innovations.

When funders are mapped by type of innovation most commonly funded (products and technologies versus practice/approach and health systems support innovations), two clusters emerge. MNCH funders in our sample tend to be high in both areas or higher in practice/approach and health systems support and less focused on products and technologies. SL@B stood out from the rest of the MNCH landscape with a strong focus on products and technologies.

Figure 7: Percent of projects by innovation type
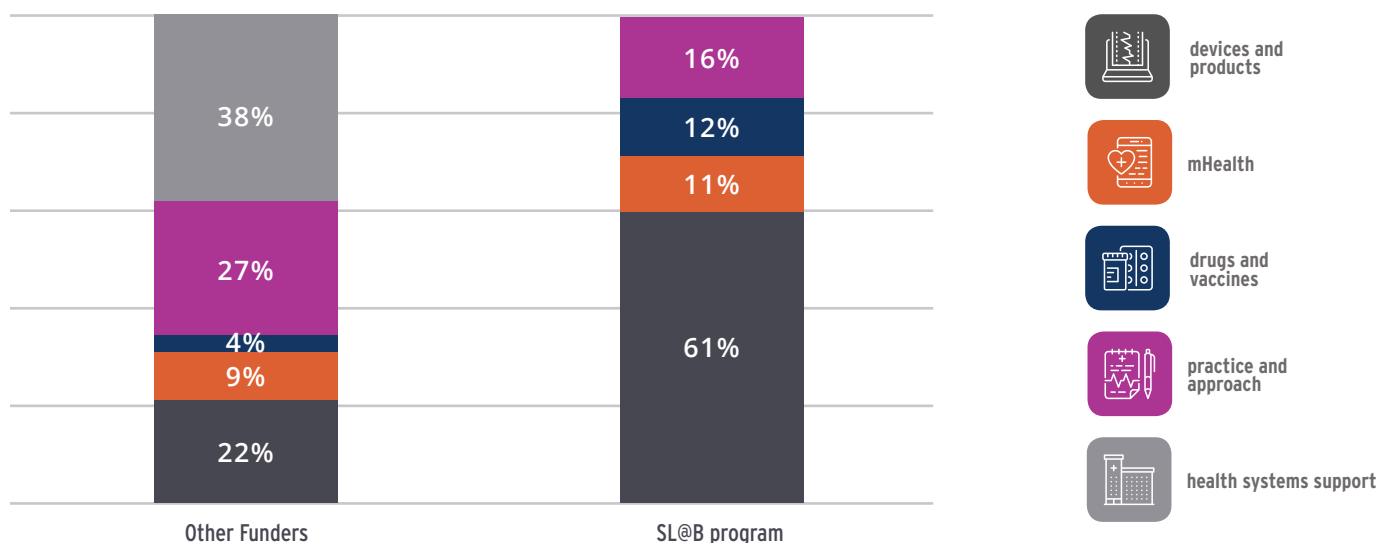
Source: SL@B program data from USAID and GCC, validated and analyzed by the authors, and publicly available information for 227 MNCH projects, collected and analyzed by the authors

In addition to a concentration of product innovations in the SL@B portfolio, the program appears to fund a greater proportion of early-stage innovations than other funders. Across the sample of non-SL@B MNCH innovations, funding awards could be divided into thirds, with 36 percent going to the three early stages (ideation, R&D, and proof of concept), about 30 percent going to transition to scale stage projects, and about 34 percent going to scaling stage projects. By contrast, the three earliest growth stages make up the vast majority (86 percent) of the overall SL@B portfolio. However, growth stage data for the projects included in the funding landscape sample were limited in availability and difficult to verify. Therefore, any analysis of growth stages among other MNCH funders included in this research is only suggestive.

Taken together, SL@B's focus on early-stage, product-based innovations originating within universities could lead to longer time-frames for scale and sustainability relative to other funders' focus on innovations in health practice and health systems support. However, this analysis also implies that SL@B fills a critical need in the ecosystem for early-stage innovation support.

> **RECOMMENDATION:** See **page 22** for recommendations on matching growth stage to program priorities.

Grantee support

The SL@B program stands out from the wider field with the integration of non-financial support. The interview data indicate that other funders do provide some level of non-financial support, typically consisting of connections to potential investors and collaborators, technical assistance, in-house corporate expertise, and consulting. SL@B's accelerator program, however, stands out in this landscape and, in interviews, grantees specifically mentioned the value of SL@B's accelerator support and the focus on the scaling process.

Other innovation funders are beginning to move in this space: GCC's Transition to Scale program provides tailored technical assistance and partnership support, Pfizer now funds a health innovation incubator in India, and the International Finance Corporation (IFC) recently launched a technology accelerator also in India that includes a health focus, to name a few. But SL@B's accelerator is unique in its focus on MNH and the opportunity to provide early-stage scaling support.

SIGNIFICANT GAPS IN THE WIDER FUNDING LANDSCAPE FOR SOURCING AND SCALING MNCH INNOVATION

Findings from this funding landscape analysis suggest four significant gaps for funders and innovators in MNCH. These gaps were identified through an analysis of the SL@B portfolio, publicly available data on other MNHC projects and funders, and interviews with funders and innovators.

1.
Less support for early-middle growth stages.
Analysis of funded projects and funder strategies indicated less available support for the early stages (ideation, R&D, and proof of concept). Interview data from funders and innovators suggests that this is most acute in the early-middle stages of establishing proof of concept and transition to scale (market entry). Innovations face what is sometimes called a "valley of death" at this point, where there are not as many funders targeting these growth stages. It is possible that funders find proof of concept and transition to scale to be high-need and high-risk, relative to earlier and later stages of growth, making it less attractive. More research is needed to assess the relative size and potential reasons for this gap.

2.
Gaps in communication skills mean the best ideas don't always rise to the top.
Innovator teams often lack the written and oral communication skills needed to attract funding, regardless of the quality of their project. This skill gap may mean that high-promise innovations are being overlooked by competitive funding processes that privilege grant writing and pitching skills. Teams based in institutions with grant writing support (such as is found at most universities and large, international NGOs) may be at an advantage over innovation teams in smaller enterprises and/or LMICs. Several funders noted that strong ideas do get left behind if innovators struggle to communicate their models or their business case in a compelling way, particularly if they are doing so in a non-native

language. One funder noted that this is a primary challenge of sourcing innovations from within LMICs. To address this issue, the funder sends teams to their target markets to hold get-to-know-you events with innovators, provide application support, and improve the innovators' readiness for funding.

3. **Lack of effective engagement with the public sector to drive scale.**
While both funders and innovators view governments as a key partner in the scaling pathway, few believe they have been successful at engaging the public sector. One funder noted that when pilots are incorporated into government strategies, this leads to their most successful scale up stories. But it can be difficult to engage governments in the sourcing, testing, and scaling process and to establish public-private partnerships. Several funders noted the lack of mechanisms to engage governments and the need for internal leadership within countries to drive innovation sourcing in the public sector.

4. **Weak peer and pipeline networks.**
Interview data indicates that a lack of coordination among funders leads to missed opportunities throughout the funding pipeline. While funders are operating across growth stages, geographies, and types of innovation within MNCH, interviewees noted that they do not know what peers are doing and do not have strong pipeline partners. Importantly, both funders and innovators identified a need for better communication and improved collaboration with their peers. In particular, several funders mentioned that they do not have strong pipeline partners and that they would be very interested in a better understanding of what other funders are doing in this field in order to improve their own impact and potential funding hand-offs for their grantees. Innovators similarly expressed a desire for more opportunities to collaborate with peers operating in the same markets and to share learning with each other.

RECOMMENDATIONS FOR THE SL@B PROGRAM

Because of the SL@B program's unique position as a funding collaborative with roots in both public and private funding bodies, the program could play a significant role in addressing the gaps and challenges indicated in the funding landscape analysis. Using its role as convener, network, and content expert, the SL@B program could provide support to strengthening both collaborations and competencies across the MNCH innovation landscape. We recommend five specific areas for consideration by SL@B funding partners.

These recommendations are based on the analysis of qualitative data and descriptive quantitative data presented in this report and specifically target the role that SL@B plays in the wider funding landscape. More comprehensive recommendations for the SL@B program, drawing on these data as well as additional qualitative and quantitative data, are available in the report "Evaluating Saving Lives at Birth: Evaluation Report, Rounds One to Eight (2011-2020)" published by Duke University.

1. **Match investments in innovation growth stage(s) to strategic aims of the program.**

Any analysis of whether SL@B is targeting the right stages of innovation must be grounded in the goals of the investment, tolerance for risk, and time horizon for impact. If the primary goal is to save lives, measured within a 5- to 10-year timeline, a later-stage focus is likely the best fit. Scaling proven innovations to new markets, with attention to developing both push (supply side) and pull (demand side) mechanisms for diffusion in target markets, is more likely to lead to impact in the form of lives saved within the near term (5 to 10 years) than investment in early stage innovation.

If the primary goal, however, is to seed new innovations and field groundbreaking ideas in the innovation pipeline, then an early-stage focus is likely more productive. It is important to note that the latter approach often requires a higher risk tolerance, with the assumption that investments in early-stage innovations will result in a small number of big wins across the portfolio. Metrics for investment in early-stage innovation in the near term (5 to 10 years) relate to milestones and early success indicators, rather than impacts such as lives saved.

If the SL@B funding partners determine that both seeding new innovations and achieving near-term impacts on health are equally important strategic aims of the program, then taking a portfolio approach, as the program currently does, may be most effective. This can provide a balance between early-stage discovery and late-stage scaling. The distribution of early- and late-stage innovations across the portfolio should ideally be determined prior to selection to match the risk tolerance and desired outcomes of the SL@B program. Different metrics of impact and success should be applied to the early stage versus late-stage investments. For example, success among early-stage investments may be measured as securing follow-on funding from another funding source or completing viability testing in the target market, where as success for late-stage innovations may be measured by number of beneficiaries reached or lives saved. The portfolio will also need to be differentiated by expectations of risk, understanding that early-stage innovations will likely have a higher failure rate.

Based on the findings presented above, the SL@B program is already seen as meeting a critical gap in the R&D and proof-of-concept stages for MNH innovation. The non-financial support provided by SL@B through the accelerator and other technical assistance helps grantees to strengthen their core capacities and prepare for scale early in their trajectory.

Within a portfolio approach, SL@B could strategically develop deeper non-financial supports and engagement strategies to address the growth challenges specific to early and late stages and provide differentiated support across the portfolio. Capacity building in areas such as business models, teams, and market research, as well as local connections in target markets for feasibility testing partners would be more relevant for early-stage innovations. For the later-stage innovations, global and local partnerships in target countries would be particularly helpful when considering adaptation and roll-out into new markets (see recommendation #4 for more on this).

2. **Develop capacity of LMIC innovator teams to pitch their projects**

Findings from this study highlight the importance of proposal writing and pitching skills in securing funding and partnerships. Further, results suggest that a capacity gap between teams in HICs and LMICs plays a significant role in the relatively low proportion of LMIC-based innovation teams funded by key MNCH funders, including SL@B.

The SL@B program provides pitching support to finalists at the DevelopmentXChange events but more is needed earlier in order to level the playing field at the time of application. The SL@B program could fund technical assistance with pitching and grant writing in target LMICs as part of the sourcing strategy, which would both strengthen the LMIC pipeline for SL@B and help to develop critical skills among LMIC innovation teams. Potential mechanisms for this capacity building include:

- In-person and online workshops
- Web-based self-directed curriculum focused on pitching and grant writing
- Peer learning groups
- Best practices and mentoring by successful LMIC applicants
- Partnerships with local incubators and accelerators
- Partnerships with hackathons and innovation design workshops

This type of support could increase the capacity of promising innovation teams in LMICs to compete for funding with large universities and non-governmental organizations in HICs, helping to level the playing field in competitive review processes.

3. **Build partnerships between HIC and LMIC innovation teams**

In addition to building capacity of LMIC innovation teams to respond to calls for proposals, the SL@B project could also consider setting up an intentional partnership model that would promote bi-directional capacity building and long-term sustainability. As noted earlier in the portfolio review section, many LMIC institutions and innovation teams may not have the same level of infrastructure and capacity to conduct basic research as HIC universities. On the other hand, they are more likely to have knowledge of the priorities, regulatory space, and market realities in their countries that can hinder the market entry and scaling of HIC-based innovation teams lacking such local knowledge.

One approach could be for the SL@B program to consider funding strong LMIC-based proposals that partner with an HIC-based team to translate and transfer basic research findings to the cultural and political contexts of the target market. This could lead to capacity building and learning for both LMIC and HIC partners, who could leverage their relative strengths in research and development, market knowledge, and networks of local and global partners.

This type of partnership structure would require development of a mechanism to facilitate the right connections between LMIC researchers or implementing organizations and their HIC counterparts seeking to address common health concerns. Anchoring project leadership in the target market, as the round 8 awards do, may lead to stronger local ownership, easier market entry, and long-term sustainability of the innovation on the whole.

4. **Drive public sector engagement in key markets**

The landscape analysis suggests that both funders and innovators would like to increase engagement with the public sector in MNCH innovation and see higher take-up by governments of proven innovations. However, the organizations we spoke with as part of this study noted the lack of mechanisms to drive government engagement and were unsure how to get the right people at the table.

There are positive indications that many SL@B grantees are partnering with or plan to partner with public health systems. The SL@B program could draw on lessons learned from these successes while creating opportunities for even greater impact.

As a large consortium representing both public and private funding organizations, the SL@B funding partners could develop a public sector engagement strategy to identify opportunities for stronger government partnerships at the subnational and national levels in two or three key markets. Potential mechanisms and focus areas for this strategy could include:

- Facilitate innovator/government interactions to raise awareness of the needs and opportunities on both sides
- Engage key national and subnational public sector organizations in the development of priorities for SL@B
- Engage public sector stakeholders from target countries in the review process for awards
- Create in-country opportunities for innovators to meet with public sector stakeholders who will be important for designing and implementing a scaling strategy
- Cultivate public sector implementation partners serving target populations
- Identify public sector/local co-investment opportunities
- Identify policy gaps and mechanisms to address policy gaps that support scale-up strategies

As part of a public-sector engagement strategy, SL@B could more deeply engage with local and national government partners to influence the ecosystem and help to drive faster uptake and scaling of innovations that meet local needs.
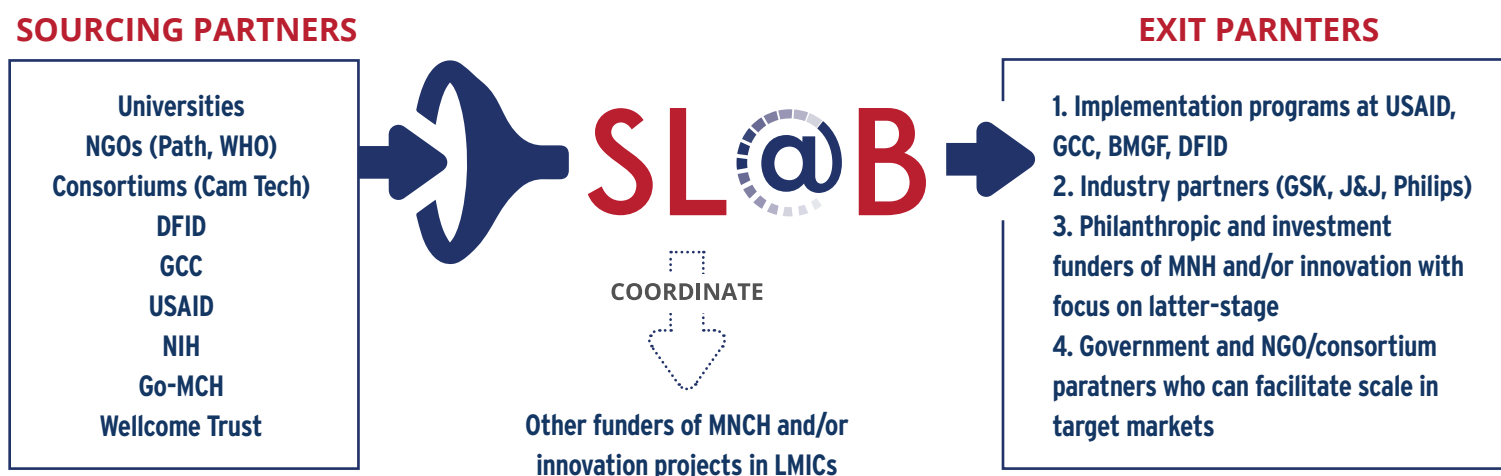
5. **Build partnerships between HIC and LMIC innovation teams**

This analysis reveals an appetite among MNCH funders for more strategic collaborations, helping each funder to maximize impact. Many funders we spoke with were keen to better understand what their peers were doing in this space and to develop stronger pipeline and handoff partnerships, share lessons and insights, and even conduct joint site visits.

The SL@B funding team, already representing six global funders, could act as a convener to raise the profile of MNH innovation and to increase opportunities for strategic collaborations and partnerships within this field. In particular, SL@B could begin by focusing on potential pipeline partners to facilitate smooth and effective handoffs of high-promise innovations.

The SL@B innovation pipeline of funders includes 1) funders and networks that can serve as sourcing partners for SL@B, 2) those that support similar types of innovations, geographies, and health priorities (operating in parallel with SL@B), and 3) those who can take up SL@B innovations post-award. (There will be significant overlap among these three categories, of course.)

Figure 8: SL@B Funder Pipeline

SOURCING PARTNERS

Universities
NGOs (Path, WHO)
Consortiums (Cam Tech)
DFID
GCC
USAID
NIH
Go-MCH
Wellcome Trust

SL@B

COORDINATE

Other funders of MNCH and/or innovation projects in LMICs

EXIT PARNTERS

1. Implementation programs at USAID, GCC, BMGF, DFID
2. Industry partners (GSK, J&J, Philips)
3. Philanthropic and investment funders of MNH and/or innovation with focus on latter-stage
4. Government and NGO/consortium paratners who can facilitate scale in target markets

Partners that can help source ideas include universities, large NGOs such as PATH, and consortiums, such as CAMTech, hosted by Massachusetts General Hospital. Funders to consider for sourcing include National Institutes of Health, National Sciences and Engineering Research Council, and the Wellcome Trust, in addition to the other funding arms of SL@B partners including DFID, GCC, and USAID. The SL@B program could consider expanding partnerships with these funders, innovation sources, and consortiums.

With regard to coordinating exits from SL@B, there are **four primary categories of funders and partners to consider**:

1. Implementation program teams funded by the SL@B partners including USAID, DFID, GCC, and BMGF. These teams should be seen as potential customers of the innovations that are being seeded and supported by SL@B.

2. Industry partners, including pharmaceutical and medical device multi-national corporations that have a clear commitment to MNH in LMICs. This may include GSK, Johnson and Johnson, Philips, Medtronic, and BD, among others. The SL@B program could consider strengthening their existing partnerships with these corporations, including regular check in calls so that there is a strategic linkage, rather than relying on an opportunistic approach.

3. Other philanthropic and investment funders with a focus on LMICs and MNH and/or innovation, including many of those in this study sample, such as ELMA and Merck for Mothers. Many of these funders are working in parallel with SL@B, with overlap in both goals and type of fundee. It may be helpful to coordinate more strategically with other funders to map priorities, share lessons learned, and strategically address gaps in the field. In addition, the SL@B program could both source from and hand-off to these funders to carry promising innovations through the scaling stages.

4. National and sub-national partners in both the public and private sector in LMICs that can serve as hand-off partners over time. As noted in recommendation #3, public sector partners are critical to the scaling process for many SL@B innovations and strengthening strategic engagement with national and local governments in key markets to facilitate hand-off could improve the success rate of SL@B innovations post-award. Private sector and NGOs, such as the Kisumu Medical and Education Trust (KMET), are also important local scaling partners.

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APPENDIX I

Study Sample: Funders (n=36 total)

- Desk research conducted on 32 funders
- Interviews conducted with 13 funders, 9 of whom were also included in desk research

NO.	FUNDER NAME	FUNDER TYPE
Desk Research Followed by Interviews (n=9)		
1	Bill and Melinda Gates Foundation (BMGF)	Philanthropy
2	ELMA Philanthropies (ELMA)	Philanthropy
3	Merck for Mothers (Merck)	Philanthropy
4	Pfizer Foundation (Pfizer)	Philanthropy
5	MacArthur Foundation (MacArthur)	Philanthropy
6	Global Health Investment Fund (GHIF)	Investor
7	Global Innovation Fund (GIF)	Investor
8	Grand Challenges Canada (GCC)	Nonprofit
9	Overseas Private Investment Corporation (OPIC)	Development Aid
Interviews Only (n=4)		
1	UBS Optimus Foundation	Philanthropy
2	Vitol Foundation	Philanthropy
3	Every Woman Every Child Innovation Marketplace	Broker
4	Johnson & Johnson (J&J)	Corporate Giving
Desk Research Only (n=23)		
1	W.G. Kellogg Foundation	Philanthropy
2	Open Society Foundation	Philanthropy
3	Rockefeller Foundation	Philanthropy
4	UNICEF Innovation Fund	Philanthropy
5	Human Development Innovation Fund	Philanthropy
6	USAID Development Innovation Ventures	Philanthropy
7	Izumi	Philanthropy
8	Humanitarian Innovation Fund	Philanthropy
9	Mulago Foundation	Philanthropy
10	Wellcome Trust	Philanthropy
11	Segal Foundation	Philanthropy
12	Children's Investment Fund Foundation	Philanthropy
13	Investment Funds for Health in Africa	Investor
14	Khosla Impact	Investor
15	Elevar Equity	Investor
16	Acumen Fund	Investor
17	Ankur Capital	Investor
18	European Commission	Development Aid
19	International Finance Corporation	Development Aid
20	Norwegian Agency for Development Cooperation	Development Aid
21	Kiwanis International	Nonprofit
22	March of Dimes	Nonprofit
23	Lion's Head	Investment Bank

APPENDIX II

Study Sample: Innovators (n=12 total)

NAME	INNOVATOR TYPE	ROUND	INNOVATION TYPE	HQ LOCATION	TARGET LOCATION
SL@B Grantees (n=9)					
Moi- Chamas for Change	LMIC University	1 & 5 (open)	Practice/Approach	Kenya	Kenya
UBC- Piers on the Move	HIC University	1 & 4 (closed)	Diagnostic	Canada	Worldwide
Columbia University – diagnostic for HIV/syphilis	HIC university	1 (closed)	Diagnostic	New York	Rwanda
MGH – UBT & Ketamine	HIC University	3, 4, & 6 (open)	Device, Drug	Boston	Kenya
Jacaranda – postpartum empowerment	Nonprofit	2 (closed)	Practice/Approach	Kenya	Kenya
dTree – all projects	Nonprofit	4 & 6 (open)	mHealth	Weston, MA	Tanzania
PATH – RELI Delivery	Nonprofit	6 (open)	Device	Seattle	NA
dRPC – Islamic opinion leaders	Nonprofit	4 (closed)	Practice/Approach	Nigeria	Nigeria
JSI – Chlorhexidine	Nonprofit	1 (extended)	Drug	Boston	Nepal
Non-SL@B-funded MNH Innovators (n=3)					
SevaMob	For profit	NA	mHealth	Atlanta	India, S Africa
Possible	Nonprofit	NA	Practice/Approach	New York	Nepal
Penda Health	For Profit	NA	Practice/Approach	Kenya	Kenya

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