

UBS Optimus Foundation

Landscape Analysis 2012/2013



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CEO letter

Dear Colleagues,

More than a decade ago, the UBS Optimus Foundation was established to pursue “the development, validation, promotion and dissemination of innovative approaches to improve education, protection and health of disadvantaged children around the globe.”

In order to fulfill this obligation, we must seek evidence, rigorously evaluate strategies, and constantly rethink how to solve old problems for children in new ways.

I joined the foundation in the summer of 2011 and soon recognized and appreciated the thoughtful strategies and reliable systems that guided the work of my new colleagues.

As a team, however, we understand that many of the worrisome threats to a child’s health and well-being are the same now as they were when we were founded fourteen years ago. Children are still vulnerable to preventable diseases, neglect, violence and the languishing of their potential that follows missed days or years in a safe and proper school.

According to the latest data, in 2011 approximately 3 million newborns died during their first month of life and 6.9 million children did not live to celebrate their fifth birthday. In 2009 an estimated 67 million school-age children were not attending school.

However, there is no denying the hopeful progress being achieved today in child health and development – a flourishing of scientific advances, political will and global giving, each shaped by some emerging and encouraging trends that favor collaboration among funders, robust assessment of programs, and a renewed respect for community know-how and capacity.

Understanding these trends and identifying the gaps in knowledge and practice that still leave children vulnerable is key to the development of a truly effective and responsive long-term strategy to defend their lives and well-being.

Thus, in advance of our five-year strategic planning process, we launched a thorough landscape analysis to deepen our understanding of these trends, inform our planning and refine our strategy.

As part of this analysis, we delved into an internally-driven process that included discussions with more than 70 global experts, intensive research and a comprehensive internal audit of lessons learned from more than a decade of grantmaking.

The process helped us identify a specific focus for our three priority areas – child health, protection and education. For example, the team determined – based on research which highlighted a lack of resources and a high burden – that our children’s health care program should address the needs of the youngest children and perinatal health. The education program will focus on early childhood education to give kids the best

start at learning, and our child protection program will prioritize the prevention of sexual abuse and violence over other intervention options.

In addition to these promising new approaches for engagement, our analysis revealed common themes across our grant portfolio and complimentary areas for integrated investments, as well as emerging global trends and our own success stories, from which we have yielded new insights and best practices.

We are pleased to share more about these results and other findings with this report, which represent the beginning, not the end, of a process that will culminate with a carefully-developed strategic plan. We plan to keep our valued peers abreast of our progress as we begin planning, and we welcome your ideas and feedback about what you read here.

We are also indebted to the many experts who shared their insights and experiences, the synthesis of which is also reflected here.

We hope you find the results as intriguing as we do, and we look forward to further discussion and collaboration with our community as we strive together to help children develop their full potential.

Sincerely,

Phyllis Kurlander Costanza
CEO, and the UBS Optimus
Foundation Program Team



UBS Optimus Foundation *background*

Vision

The UBS Optimus Foundation is dedicated to the overall well-being of children. We are committed to a world in which all children and adolescents have access to healthcare and education and may grow up in an environment free from violence and sexual abuse.

Mission

We support the development, validation, promotion and dissemination of innovative approaches and ideas to improve the education, protection and health of disadvantaged children around the globe, regardless of their political, religious or ethnic backgrounds.

As a foundation established by UBS, we promote the shared philanthropic commitment of clients, management and employees. We make every effort to ensure that the funds entrusted to us are invested for the maximum positive impact on children's lives.

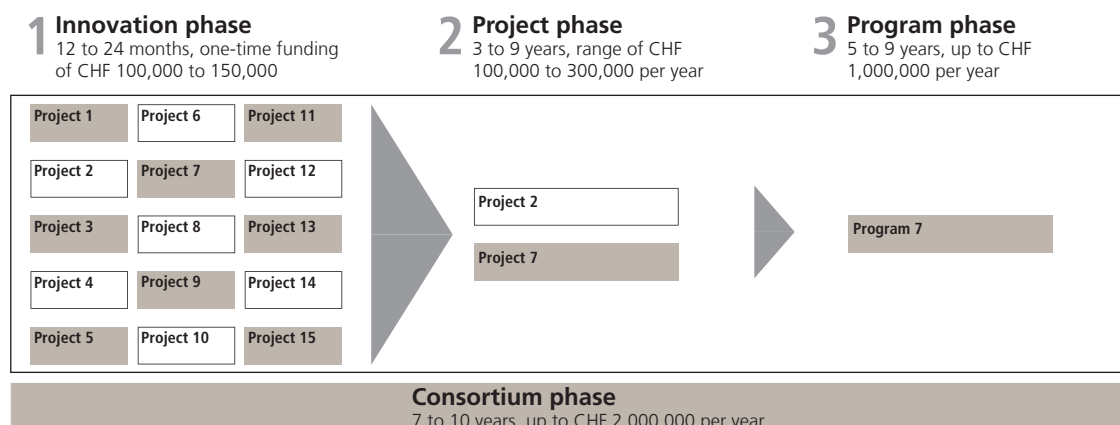
Approach

The foundation applies a systematic four-phase value chain approach to our grantmaking in order to develop, validate, promote and scale up effective solutions to improve children's health, education and protection. The process starts with the "innovation" phase where we seek to validate ideas. Successful projects then progress through a series of stages with increasingly greater financial and time commitments. At each stage of the value chain, the selection criteria are refined to ensure we are supporting projects that best fit the foundation's long-term strategic vision. The phases of the value chain are illustrated below.

"To achieve the positive impact that our donors expect and children deserve, our priority is to evaluate the gaps in knowledge and practice that leave children vulnerable and to explore new and promising solutions."

Jürg Zeltner, Chairman of the Board,
UBS Optimus Foundation

Grantmaking value chain



Introduction

A brief history

Established in December 1999 by UBS AG, the UBS Optimus Foundation is an independent grantmaking foundation committed to improving the well-being of children. It is headquartered in Zurich, Switzerland and led by a team with extensive professional experience in child health, protection, and education. As of February 2012, we have 119 active projects, representing an investment of 87 million Swiss Francs (CHF).

Our funding comes primarily from UBS banking clients. Because UBS AG covers all of the foundation's administrative costs, 100 percent of client donations go directly into philanthropic projects. Furthermore, since many of our projects involve co-funding with other organizations, including foundations, local governments and corporations, it is often the case that client donations leverage significantly more than their individual contributions.

The foundation believes that all children deserve every opportunity to grow and thrive, free from debilitating disease, neglect, abuse, or marginalization. Three guiding principles shape our approach to delivering positive and measurable improvements in children's lives. First, we serve the hardest to reach and most vulnerable children. Second, we take smart risks. Third, we invest in lasting outcomes rather than temporary short-term solutions.

Past and present focus: areas of interest and grantmaking approach

We are focused on creating a world in which all children have access to quality education and freedom from ill health and abuse. To improve the general well-being of children, and ensure that UBS client donations are used as effectively as possible, the foundation focuses on three distinct granting areas: child health, child protection, and education, primarily in low and middle-income countries.

The Optimus Foundation focuses on solution-oriented research and innovations across all three granting areas in order to generate long-term positive changes that will extend beyond the individual projects we fund.

Solution-oriented research aims to:

- Validate what works for the field
- Facilitate scaling and replication of evidence-based innovative approaches
- Ensure high-quality projects that benefit children

Identifying opportunity areas: the 2012/2013 UBS Optimus Foundation Landscape Analysis

The foundation's next 5-year strategic plan is scheduled to begin in 2013/14. In preparation, we conducted a philanthropic market analysis or "landscaping" to provide a context for development of the new strategy and ensure we were poised to have the highest possible impact to improve children's lives. We reviewed trends, needs and opportunities in philanthropy and in the foundation's three granting areas. We were mindful of the foundation's size, capabilities, mission and guiding principles as we sought to identify opportunities that were both high impact and attainable. We also developed a set of specific criteria to help filter the range of options. Finally, within each granting area, we mapped approaches against needs to define opportunity areas.

The goal of the landscaping was to develop a map of the most impactful opportunity areas for the Optimus Foundation to consider, and enable a strategic discussion around how the foundation should achieve its goals and assess its impact.

As a starting point for this landscape analysis, the Board expressed its strong desire to continue its grantmaking in the areas of children's health, protection, and education. For each of these fields, we defined a focus age group of children, the dimensions of vulnerability, and a geographic focus area. The definition of a child – anyone under the age of 18 as described in the UN Convention on the Rights of the Child – is consistent across all three areas, but our particular emphasis is on children in the early childhood years between ages of 0 and 5. The geography and vulnerability definitions vary somewhat across the three granting areas and are described in each chapter.

For the purpose of the landscaping, we articulated eight specific criteria to guide what would be included and to clarify the characteristics of high quality opportunity areas. These include:

- *Social Impact* guides us to look for opportunities that address the needs of vulnerable children in a manner that is feasible, scalable, and replicable.
- *Innovation* stresses unique opportunities; these must be distinct from existing interventions and be capable of catalyzing a paradigm shift that could change the field.
- *Evidence* places a high premium on well-established programs that can be codified and replicated and are amenable to ongoing assessment.
- *Capacity strengthening* prioritizes opportunities that can strengthen human resources and/or build infrastructure; it also seeks opportunities to facilitate long-term policy, practice, and funding improvements.
- Our *“Bridge the gap”* criterion looks for areas where we can fill a critical void and ensures that important ideas receive the attention they deserve; it also looks for opportunities that can leverage or involve complementary resources.
- *“Leave behind”* instructs us to focus on opportunities that will create not only immediate benefits but also lasting positive impacts for vulnerable children and other stakeholders.
- The *“Easy-to-explain”* criterion looks for opportunities that can be easily grasped by and explained to UBS management and client advisors. These include development opportunities that are logical and easy to follow – rather than overly technical, complicated and dense – and are also attractive to our clients and external partners.
- The *“Optimus/UBS capabilities”* criterion looks for opportunities that match the Optimus Foundation’s and UBS’ professional expertise, financial resources and global reach.

Diverse sources helped us formulate and verify our observations and hypotheses. We consulted more than 70 child health, protection, and education experts from different sectors, including local and national government; international, national and local non-profit organizations and NGOs; academia; thought leaders; and bilateral and multilateral organizations. We also spoke to our grantees and prospective grantees and consulted critical reports and publications from UNDP, UNESCO, UNICEF, UNFPA, UNHCR, the OECD, the World Bank, and the World Health Organization, among others. Finally, we looked at the lessons we have learned, mining the foundation’s knowledge and harnessing experience from more than a decade of grantmaking.

Trends in global philanthropy

Though focused on the foundation’s three granting areas, this landscaping exercise also identified three major trends in global philanthropy that influence all actors, including the Optimus Foundation:

Collaboration is key – Funders want to work together. They are increasingly seeking co-funding opportunities, as well as Public Private Partnerships (PPPs) where diverse sectors – public, private, and social – can combine their interests and expertise in order to build economies of scale, minimize grantee risk and enhance impact.

Assessment matters – Social enterprises want to scale-up what works in order to help the most vulnerable populations. Thus, they are increasingly focused on creating evidence-based programs that can demonstrate what works and achieve measurable outcomes.

Leveraging local capacity – No one understands the situation “on the ground” better than the people who are living there. Local people are also critical to ensuring the sustainability of programs. Successful projects engage communities, harness local leadership and recognize local expertise to solve local problems.

Focus: child health

Defining target age: Within child health, our overall goal is to support projects that improve the lives of the most vulnerable children between the ages of 0–18, with a particular focus on children under age 5. Children under five have the highest mortality rate of any age group¹. Indeed, in our fifteen focus countries (see page 12), there were more than 1 million deaths per year among children between the ages of 0–5 compared with more than 60,000 deaths per year among children between the ages of 6–14 and more than 210,000 deaths among people between the ages of 15–59. The 0 to 5 age group presents great need and a high health burden, but it also shows tremendous potential: it is here that we find the greatest opportunity to achieve long-term positive health impacts.



Community knowledge is key to success as this young Nicaraguan girl shows her peers where to break the mosquito breeding cycle on the “green road” to dengue elimination.

Defining vulnerability and geography: Two multidimensional indices – the Bristol Child Deprivation Index and the Oxford Multidimensional Poverty Index – were used to define vulnerability and help us identify 11 sample countries. We then added four countries with strong UBS operations and presence.

Other funders: In 2010, foundations, multilateral and bilateral agencies, corporations, non-profits, and low- and middle-income country governments collectively spent about 887 billion US dollars on health in low and middle-income countries. The majority of this spending (51 percent or 449 billion US dollars) came from middle-income country governments. Non-profit organizations and low-income country governments each

accounted for about a quarter of all health spending (23 percent each and 206 billion US dollars and 201 billion US dollars respectively). We estimated that 15 percent of all health spending in 2010 – about 136 billion US dollars – went to child-specific health programs.

Collectively, foundations accounted for just one percent of all 2010 health spending, but three organizations made significant contributions. The Bill & Melinda Gates Foundation, the Wellcome Trust, and the Rockefeller Foundation spent 1.5 billion US dollars, 1.2 billion US dollars, and 36 million US dollars on health, respectively. The Optimus Foundation has comparatively limited resources, but still ranked as the third highest philanthropic investor in product-related research on neglected diseases according to the 2011 G-FINDER report. This contribution to health research is important, but we need to think strategically to ensure that this investment has a high impact across all areas of our health portfolio.

Focus: child protection

Defining target age: As children of all ages are affected by sexual violence and abuse, the UBS Optimus Foundation's focus on child protection will cover all children between the ages of 0–18. This is in contrast to how the Foundation will pursue child health and child education, which both emphasize early years.

Defining vulnerability and geography: As a relatively new field which is still developing important evidence, child protection lacks information about which groups are most vulnerable to abuse. Currently, experts believe that all children – regardless of their socioeconomic status and home country – are equally vulnerable.

For this reason, unlike in health and education, we have not selected specific countries based on prevalence or vulnerability. Our geographic focus will cover all low- and middle-income countries, plus Switzerland where the Optimus Foundation is headquartered.

Other funders: As Overseas Development Assistance (ODA) data are not available for the field of child protection, we relied on available data from the Foundation Center regarding US-based spending. Based on these data, in 2010 private foundations spent 862 million US dollars on child protection. The top five foundations investing in this area were the W.K. Kellogg Foundation (115 million US dollars), the Bill & Melinda Gates Foundation (80 million US dollars), The Annie E. Casey

Sample health project: reducing the risk of rabies, replicating results – from Bohol, Philippines

Background – More than one billion people across Africa and Asia are vulnerable to rabies infection, which causes the prolonged and painful death of a child every fifteen minutes. This disease results in death if left untreated, and the poorest children are disproportionately affected. Until recently, rabies was a significant threat to the 1.3 million people living on the Philippine island of Bohol, which led the region in rabies cases.

Partner organizations – the Global Alliance for Rabies Control (GARC), the US Centers for Disease Control and Prevention, Swiss Tropical Public Health Institute and the national and local governments of Chad, Nias, Philippines and Tanzania.

Beneficiaries – More than 5,000 Bohol community members have been trained as village rabies watchers. Local health and agriculture workers were mobilized to vaccinate stray dogs, and to register and vaccinate pet dogs. School-based rabies education was also established so that now, every year more than 185,000 children learn about bite prevention, rabies treatment and responsible pet ownership.

Objectives and results – Our grant to the GARC stimulated and leveraged significant additional funding from the government of the Philippines – in fact, their contribution ultimately exceeding our own. In just four years, dog vaccination and registration increased from 2.6 percent to approximately 70 percent. Within the first 18 months of the program, human rabies deaths decreased by half. Today, Bohol is free of rabies. In addition, the project also resulted in a significant reduction in the number of road accidents caused by stray dogs.

Scaling – We are now supporting GARC to replicate the Bohol campaign's best practices in other affected countries including, Chad, Indonesia and Tanzania and looking to expand this successful campaign to other parts of the Philippines

Learn more – the project is featured in the 2012 edition of "Case Studies for Global Health" (www.casestudiesforglobalhealth.org).

Foundation (57 million US dollars), The Robert Wood Johnson Foundation (35 million US dollars), and the Ford Foundation (27 million US dollars). All of these foundations have considerably larger budgets than the Optimus Foundation. In 2010, we spent about 5 million US dollars on child protection.

Focus: child education

Defining target age: In child education, we will have a primary focus on children between the ages of 0 to 8 and an extended focus on children up to age 18. The rationale for this age focus is based on solid evidence that interventions in younger years represent the greatest opportunity to achieve positive impact.

Defining vulnerability and geography: We used four data sources – the Bristol Child Development Index, the Oxford Multidimensional Poverty Index, UNESCO Statistics from 2011, and the UNDP International Human Development Index – to assess educational vulnerability, highlighting 14 focus countries with very poor indicators. To this list of countries, we added two Latin American countries with strong UBS operations, and a North African country to ensure regional representation.

Other funders: In 2009, the world spent approximately 240 billion US dollars on education in low- and middle-income countries, according to an OECD report from 2011. The majority of this money – 93 percent or 220 billion US dollars – came from in-country spending by those countries themselves. Foundations accounted for only one percent of the total – 2 billion US dollars, while Overseas Development Assistance (ODA) accounted for six percent (13 billion US dollars), of which bilateral ODA accounted for 9.5 billion US dollars and multilateral ODA accounted for approximately 4.5 billion US dollars.

The top three areas for ODA education spending in 2010 were higher education, primary education, and education policy and administration. Higher education received almost 4 billion US dollars; primary education received just over 3 billion US dollars; and education policy and administration received just under 3 billion US dollars. Teacher training, basic life skills for youth and adults, early childhood education, and education research received less than 165 million US dollars in ODA funding. The Optimus Foundation believes these areas are critical to the field, and among the most highly leveraged investments for the 7 million US dollars we contribute to education each year.

Sample child protection project: the children and violence evaluation challenge fund

Background – By funding quality evaluations of violence prevention and child protection projects in low- and middle-income countries, this ongoing collaboration addresses the insufficient evidence and knowledge base in these fields.

Partner organizations – Bernard Van Leer Foundation, the Oak Foundation, WellSpring Advisors (in 2013)

Objectives – Generate and disseminate solid evidence on what works among violence prevention and child protection interventions, and to improve policies and programs and ensure that children are protected from all forms of violence. This project also supports research to develop new strategies to reduce physical, emotional, and sexual violence affecting children in family settings.

Grantee organizations – Applicants include non-profits, universities, and research institutions. Partnerships are encouraged between researchers and practitioners and between multilateral organizations and governments.

Learn more – www.evaluationchallenge.org

Sample child education project: high-quality secondary education for girls in Afghanistan

Background – There is a strong case to be made for girls' education. In addition to the numerous benefits education provides students, evidence suggests that well-educated girls will have better educated and healthier children. But in Afghanistan, 60 percent of girls are not attending school.

Partner organization – The Womanity Foundation

Beneficiaries – More than 30,000 female students and 700 female teachers

Objectives – This pilot project works to improve access to education and learning by targeting both students and teachers. Students receive access to high quality secondary education so they can attend university and become active, engaged members of their communities. Teachers are provided with critical skills to improve their curricula and pedagogical skills.

Buy-in and dissemination – The project is co-funded by the Afghan Ministry of Education and has strong potential to be replicated and scaled.



Child *health*

Background

The UBS Optimus Foundation has been investing in global health for more than a decade. For the first ten years of operations, our grantmaking supported a wide range of projects in the fields of neglected tropical diseases and child health. In 2009, we narrowed our strategy, prioritizing the development of solutions that connect health knowledge to field action, combined with rigorous evaluation to identify and understand what works. Of course, the foundation's efforts do not take place in a vacuum.

We pursue our mission within a complex landscape of global health actors, tensions and trends. Other actors include foundations, aid agencies, low- and middle-income country governments, researchers, think tanks, non-governmental organizations, social enterprises, public-private partnerships, and private firms. There may be tensions – some constructive, others not – between public and private actors, rich and poor countries, or the proponents of technological versus systemic solutions. Current trends in the global health sector include urbanization, demographic transitions, the rise of emerging economies, and accelerating technological innovation.

In addition, there are three trends that are especially relevant to our health grantmaking. The first two are negative and the third positive. First, the donor community's current emphasis on technological solutions and narrow, vertical approaches (such as a focus on one specific disease) tends to weaken local health systems in resource-poor settings where children suffer most. Second, today's exciting profusion of innovative health solutions has not been matched by a comparable level of innovation in the delivery of those solutions to the people who need them most. Finally, a positive trend is emerging as public and private actors embrace new partnerships that harness diverse skill sets – for example, financial acumen and experience with local communities – to overcome global health challenges.

Landscape scope and process

In 2012, we launched a study of the global health landscape to identify feasible and attractive opportunity areas for the foundation to consider in selecting future investment strategies. This paper summarizes the results of that analysis. It outlines the most promising ideas and entry points – and the rationale behind them – to guide future grantmaking.

Key definitions

To define the global health landscape in the context of our broad mission to improve the lives of vulnerable children around the world, we first answered three key questions:

- Who do we mean by “child”?
- How do we define “vulnerability”?
- Where, in what geographies, should we work?

The UN Convention of the Rights of the Child defines a “child” as anyone under the age of 18. While we remain committed to the health of all children, we place a special emphasis on *children under the age of 5*. Stated simply, children in this age range suffer the highest burden of death and disease, and can also benefit the most from early



Delivering health services, products and knowledge to children can be particularly challenging in peri-urban and rural areas as infrastructure is limited if it exists at all.

health interventions – with proven long-term positive benefits. Also, we are committed to children over age five because in addition to health, the foundation makes grants in the area of education and there are many potential synergies between health and education for school-age children. School-based health interventions, for example, can simultaneously improve child health and academic achievement.

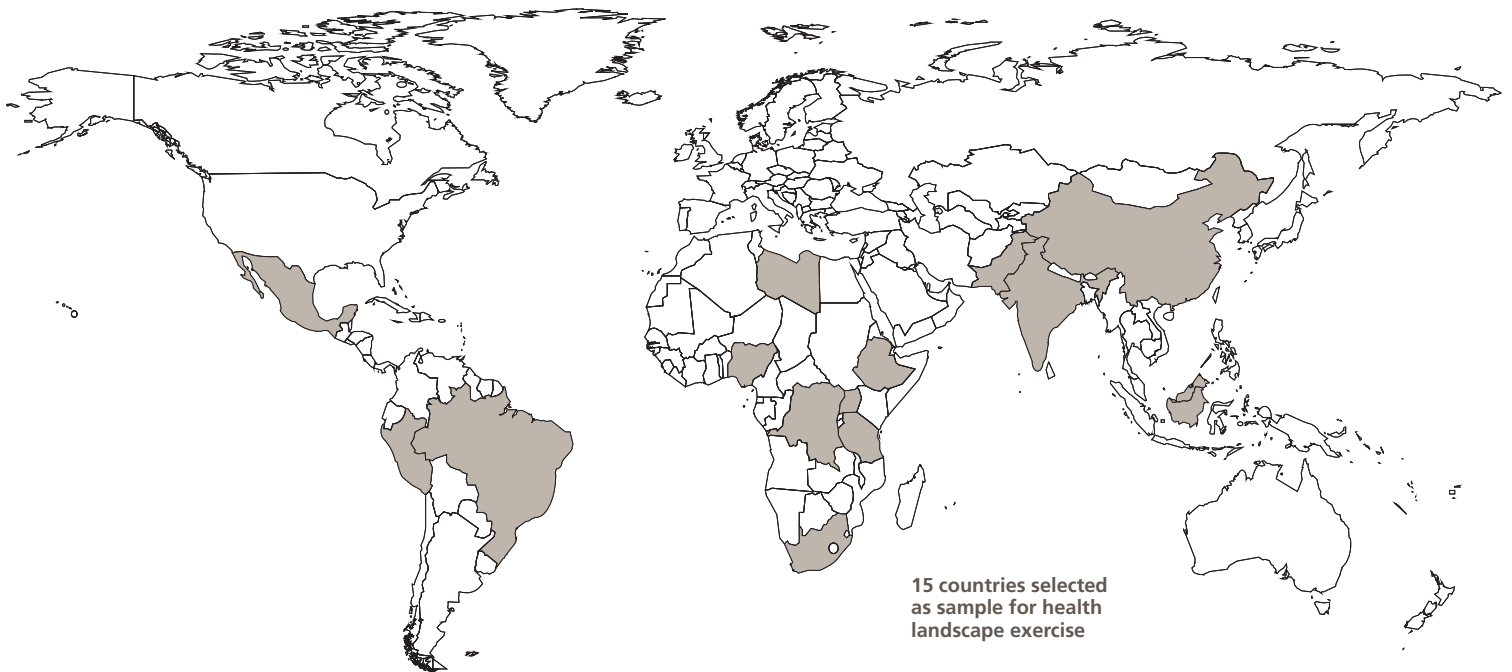
Finally, we extended our definition of “child” to cover the *perinatal period*, which begins during the last weeks of pregnancy and extends through the first few weeks of life. The perinatal stage is a critical time for both mother and child². For children to be born healthy and stay healthy, they need healthy mothers who survive childbirth. But perinatal conditions – including premature birth and low birth weight, birth trauma and asphyxia, and infections – do not attract the global attention and resources they warrant – especially in the most remote locations.³

To define *vulnerability*, we relied upon two internationally recognized indices: the Oxford Multidimensional Poverty Index (MPI)⁴ and The Bristol Child Deprivation Index⁵. The MPI covers ten indicators, including lack of education, health, nutri-

tion, electricity, drinking water, sanitation and housing. The Bristol Index measures a similar range of factors at the country level, with a specific focus on children. Both indices can be disaggregated to isolate health-specific factors.

We also used these indices to define the *geography*: specific countries where children are particularly susceptible to poor health. Eleven nations – *Bangladesh, China, D. R. Congo, Egypt, Ethiopia, India, Indonesia, Nigeria, Pakistan, Tanzania and Uganda* – had consistently weak MPI and Bristol indicators. To this list we added *Brazil, Mexico, Peru and South Africa*, countries where UBS has a strong presence and the potential to leverage its influence on behalf of vulnerable children. We confirmed that more than 70 percent of the world’s vulnerable children live in these 15 countries.⁶

With this sample, we explored the distribution of child vulnerability. Specific diseases and conditions – e.g. individual species of parasitic worms and malaria – certainly map to specific regions. However, overall our analysis reinforced the imperative to consider the health needs of children in all low- and middle-income countries – rather than just one or two specific regions.



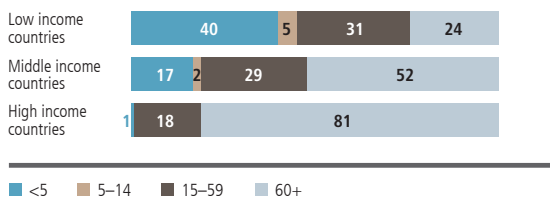
The state of health for vulnerable children

Children in low- and middle-income countries are often poor and sick as they lack access to critical services and provisions including sanitation, clean water, nutritious food, healthcare and shelter. Regardless of country or region, these children bear a much larger health burden than the global population. Two well-known measures help to illustrate this point: childhood death and disabilities.

As shown in the figure below, 40 percent of all deaths in low- and middle-income countries were among children under the age of five, and more than one-third of all deaths in low- and middle-income countries were among children under the age of 14. In contrast, children in high-income countries are decidedly less vulnerable. Only one percent of all deaths in high-income countries occurs under the age of 5, and there are so few deaths between the ages of 5 and 14 that the percentage is effectively zero. In rich countries, 81 percent of all deaths occur over the age of 60.⁷

Deaths by age group

in %

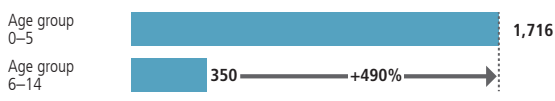


Source: UN population division; World mortality report 2009, WHO Department of Measurement and Health Information: Mortality and burden of disease estimates for WHO member states in 2004, WHO. The global burden of disease: 2004 update. Geneva, World Health Organization, 2008. (<http://www.who.int/evidence/bod>).

The mortality rate for children under the age of five in low- and middle-income countries is the most severe in Africa and Southeast Asia. Yet, as shown in the figure below, the death rate for all children under the age of 5 in low- and middle-income countries is nearly 500 percent higher than the rate for children between the ages of 6 and 14.⁸

Mortality by age group in low and middle income countries

in low/middle income countries 1,000 deaths/year per age group



Source: *ibid*

Disability-Adjusted Life Years (DALYs) estimate “healthy life years lost,” not just to death but also to sickness and disability. In low- and middle-income countries, 107 million DALYs are lost each year among children under the age of five, compared to 11 million DALYs lost among children aged 5–14, and 18 million among young people aged 15–29.⁹ In high-income countries, the greatest burden of DALYs is – as we would expect – among older adults.

DALYs by age group in low and middle income countries

in low/middle income countries 1,000 disability-adjusted life years per age



Source: *ibid*

Double burden: communities suffer when kids get sick

Most people have suffered from the flu or a bad cold at some point in their life and can attest to the misery of ill health. But in low- and middle-income countries, poor health is more than just a nuisance. It can rob children of their childhoods, preventing them from attending school, socializing, and growing into productive adults. And when kids are sick, their parents often have difficulty working and contributing to society during their peak years of productivity.

The causes of ill health – including specific health conditions described in the next section – are often preventable and treatable. By definition, vulnerable children lack access to essential healthcare, and the primary goal of the foundation’s health investments is to develop and test effective and sustainable ways to address this gross inequity.

At the same time, we are also concerned about the long-term negative socioeconomic consequences of ill health for communities and nations. Malaria is a tragic case in point. Spread by mosquitoes, this debilitating disease has disproportionately afflicted the African continent where, by one estimate, it has reduced gross domestic product growth over the past 50 years by 37 percent.¹⁰ An analysis of malaria in Latin America found that for each year of childhood infection, adult income drops 2.5 percent.¹¹ Diseases like malaria create a vicious cycle in low-resource environments where poverty exacerbates ill health, and ill health begets poverty.

Strategic investments in health can help break such patterns. For example, a recent study found that boys in Guatemala who received low-cost nutrition supplements at the age of 3 later had adult wages 46 percent higher than control groups.¹² More than 100 years ago, the Rockefeller Sanitary Commission launched a campaign to eradicate hookworm, which, in 1909, afflicted 40 percent of children in the American South. Reducing the disease burden not only made kids healthier, it also improved school enrollment, attendance, literacy and, later, adult incomes.¹³ Nearly a century later, a Kenyan de-worming program followed children in 75 schools where more than 90 percent of kids were infected; 10 years later, treated children earned over 20 percent more than those in the control groups.¹⁴

Child health needs: our priorities

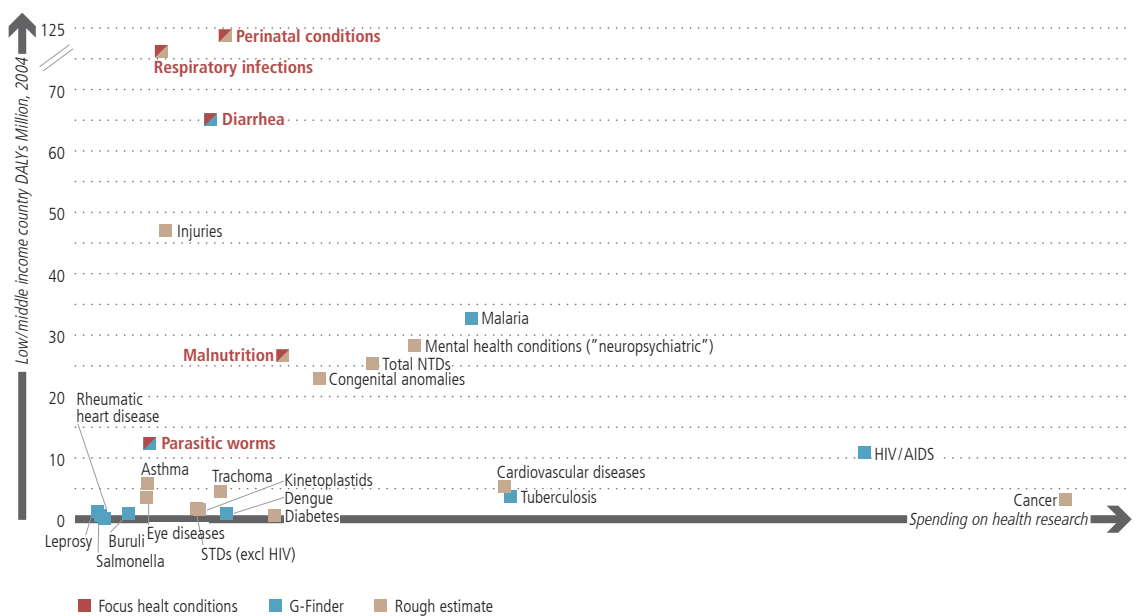
Children in low- and middle-income countries suffer from myriad diseases and health conditions. All warrant attention, but we wanted to identify priority conditions that could help guide our later analysis (similar to the sample countries chosen earlier) and where our grantmaking can make the greatest difference. We began by looking for high-burden health conditions that receive relatively little attention from other funders (see graph below).

As the graph indicates, *perinatal conditions*, *respiratory infections* and *diarrhea* immediately stand out. Viewed together, these three health conditions are responsible for 50 percent of the health burden among children under the age of 14 in our sample countries.¹⁶ These conditions rank as the top three causes of DALYs lost in all low- and middle-income countries,¹⁷ and they are the main causes of death for all children under five.¹⁸

To identify other important health conditions, we applied two additional criteria. First, we looked for health conditions that are tightly linked to perinatal conditions, respiratory infections, and diarrhea through cause, co-infection and comorbidities. Second, we looked for health conditions that have potential synergies to our other grantmaking in education and child protection. As a result, we selected two additional health conditions: *malnutrition* and *parasitic worm infections*.

Parasitic worms – linked to malnutrition, anemia and stunting – afflict more than 80 percent of the world’s “bottom two billion.” As one interviewee said, “You will always find these diseases wherever you find extreme poverty, and that is the most common determinant.” Malnutrition is frequently observed in children suffering from diarrhea. It weakens the immune system leaving children susceptible to infections like respiratory infec-

Health conditions with the highest burden among children aged 0 to 14



Source: The vertical axis, disease burden measured in DALYs, is from data provided by the World Health Organization.¹⁵ The horizontal axis represents donor investment in research to address specific diseases and health conditions in low- and middle-income countries. These investment figures are notoriously difficult to find; relative investments are estimated here from a variety of sources, and in some cases extrapolated based on assumptions. Despite these drawbacks, our judgment is that the relative position of different health conditions on the horizontal axis is largely accurate.

tions, parasitic worms and malaria. Schools are an ideal entry point for health interventions to eradicate worms and diarrhea, and the reduction of these diseases is known to improve school achievement.¹⁹

We selected these five priority health conditions for roughly the same reasons that we had selected 15 sample countries earlier. These “sample” conditions allowed us to test philanthropic approaches, explore past success stories from the field of global health, visualize possible “dream projects” and best illustrate the health needs of children in resource-poor settings. While these conditions are likely to be the focus of many future Optimus Foundation investments, our investments will not be exclusively restricted to these five.

Defining the problem

We identified almost a dozen barriers that contribute to the health burden of vulnerable children. The enormity of some barriers – poverty, for example – require structural, political and economic changes that clearly exceed the Optimus Foundation’s influence and resources. The lack of access to affordable medicines and vaccines in resource-poor settings is another formidable challenge that is, in most cases, better tackled by governments and donors with deeper pockets.

Rather, our analysis highlighted four barriers that we can address: (1) health solutions developed for adults, not kids; (2) health solutions that don’t reach the most remote and vulnerable children; (3) local capacities that are undervalued and poorly supported; and (4) global health efforts that are not sufficiently interdisciplinary.

Rx – for adults only: Most medicines are developed for adults. Our knowledge about their safety and efficacy is based on clinical trials involving adults and we know little about how they affect children. The result is a modern armamentarium of medicines, many of which may be inappropriate for or even dangerous to children.²¹ In 2007, the World Health Assembly passed a resolution urging member states to take action on this issue. It noted “significant risks of high morbidity and mortality in children, especially those under five years of age [because] many manufacturers of essential medicines have neither developed nor produced appropriate dosage forms and strengths of medicines for children.”²²

Health needs for all children

Surviving childbirth – Perinatal conditions arise during the period surrounding birth – by one definition, from 28 weeks of gestation to the second month of life. They include premature birth, low birth weight, birth trauma, asphyxia (breathing difficulties) and infections. In addition to having significant impact on later physical and cognitive development, perinatal conditions account for 124 million DALYs and 2.6 million deaths per year in low- and middle-income countries.

Appropriate nutrition – Malnutrition is a dietary deficiency that impairs immunity and also disrupts physical and cognitive development, contributes to 30 percent of all deaths for children under the age of 5 and is the direct cause of 27 million DALYs. Malnutrition is the most important global risk factor for childhood illness and death.

Free from infection – Poor children are especially susceptible to infections when they are malnourished, with weakened immune systems, and when they lack access to adequate health care. Infectious agents – including bacteria, viruses, and parasites – result in a wide variety of childhood diseases such as those below:

- Respiratory infections are defined as bacterial, viral and fungal infections of the lung, particularly of the lower respiratory tract. They are responsible for 1.7 million child deaths per year and 76 million DALYs lost.
- Caused by cholera, salmonella, rotavirus, Giardia, E. coli, and other bacterial, viral and parasitic organisms, diarrhea is defined by the World Health Organization as the passage of 3 or more loose or liquid stools per day. Diarrhea accounts for 1.3 million deaths per year and 65 million DALYs lost.
- Parasitic worms, including schistosomiasis, lymphatic filariasis, onchocerciasis, hookworm, roundworm, tapeworm, whipworm, strongyloidiasis and other intestinal parasitic worms are worms that live in, and feed off of, a host organism’s large or small intestines. They account for 47,000 deaths per year and 12 million DALYs lost although recent studies suggest this number is actually much higher.
- Other infectious diseases include childhood killers like malaria and dengue that are spread by mosquito bites as well as rabies – a viral infection that is invariably fatal if not treated immediately – and flesh-eating conditions such as Buruli ulcer which primarily afflicts children under the age of 15.

Free from preventable injuries and non-communicable diseases (NCDs) – Should a child manage to survive his/her fifth birthday having overcome the challenges of birth, nutrition, and infection, there are still significant challenges leading into a healthy and productive adulthood. These include:

- Preventable injuries – road traffic injuries, drowning, burns, falls and poisoning – take the lives of more than 2000 children and teenagers every day, and account for 46 million DALYs lost each year in low- and middle-income countries.
- Non-communicable diseases (NCDs) include cardiovascular disease, diabetes, autoimmune diseases, asthma and most cancers. The leading cause of mortality in the world, they are primarily responsible for death and disability in adults.

Kids are last in line: Even when appropriate health solutions do exist, they frequently fail to reach the most isolated and vulnerable children. Access is a complex issue. Many poor countries and poor parents simply cannot afford medicines and health services. In addition, delivery systems need significant innovation; getting products to the people who need them most remains an elusive challenge. Children in low-resource settings suffer the most from a global failure to invest in improved health service and product delivery methods.

Outside owners: External “experts” often develop and implement health solutions in poor countries. Consultants travel great distances – at high cost – to deliver their technical knowledge “in the field.” Projects that give local experts and communities the lead role in developing solutions are, unfortunately, nearly as rare as the resources needed to strengthen local capacity.

Dis-integrated health programs: Five of the eight Millennium Development Goals (MDGs) focus on health. It is not yet clear whether developing countries will achieve the MDGs – the deadline is just three years away, and some regions are far behind – but there is growing consensus on the need for multi-sector collaboration “to fast-track attainment.” Too often, solutions are pursued in isolation. “Many strategic challenges impeding the success of primary health care are rooted in weak strategic inputs, including lack of intersectoral collaboration.”²³

Approaches

Once we identified the key global health barriers and needs where we believe we can have an impact, we then defined four approaches that could best overcome these barriers and improve the health of vulnerable children. These



Many conditions that affect children’s development can be hidden from them and their communities. This girl is from Myanmar, where more than 40% of children are found to be quietly suffering from parasite infections that directly result in growth stunting, lingering infections, poor health and poor school performance.

approaches reflect the priorities of the Optimus Foundation and the specific criteria for this landscaping as outlined in the report introduction.

Adapt solutions for children

This approach supports efforts to reformulate medicines and re-tool other health products such as diagnostics to be safe, effective and age-appropriate for children. For example, children under 5 need chewable tablets because they have difficulty swallowing solid pills. But children under the age of 2 may choke on chewables so liquid formulations are ideal, but these may require refrigeration and training to deliver. In tropical environments and low-resource settings, dispersible powders (“just add water”) are often preferred.²⁴ Similarly, diagnostics often need to be adapted for children because samples – for example blood or sputum – cannot be obtained in the same way as with adults.

We have a good idea where to begin in adapting solutions for children. In Priority Medicines for Mothers and Children, the World Health Organization, United Nations Population Fund (UNFPA) and the UN Children’s Fund (UNICEF) list “priority medicines required for child survival, but for which further R&D is needed.” These include fixed-dose pediatric tablets for tuberculosis (TB) and fixed-dose combination medicines against HIV, TB and pneumonia.²⁵

Adapting adult solutions is an attractive approach for the Optimus Foundation because it makes existing medicines and diagnostics safer, more effective and more accessible to vulnerable children. Compared to the discovery and development process for new drugs – which can take 10–15 years and cost hundreds of millions of US dollars – reformulating adult medicines for children is relatively fast, feasible and affordable.²⁶

Bring solutions to children

This approach focuses on innovative delivery and implementation methods to bring proven solutions to remote and vulnerable children. It acknowledges that poor children often have limited mobility and need to be treated locally, at home or in their communities. Many developing countries have limited infrastructure, poor roads and inadequate storage facilities, significantly complicating the timely distribution of critical medical supplies. If supplies do arrive, communities may lack electricity, refrigeration and special facilities to store them. They may also lack trained health workers to distribute them in an appropriate manner – for example, ensuring that topical medicines are applied to the skin and not swallowed.

Delivering health services and products is particularly challenging for children living in more remote and rural areas as “hospital resources are concentrated in urban areas,” according to Kahn, Yang, and Kahn.²⁷ “There are not enough health care workers... and such workers are difficult to recruit and retain, especially in rural areas.”^{28 29}

Bringing solutions to children is attractive to the Optimus Foundation because this approach targets the most remote and vulnerable populations – both in rural settings and urban slums. We believe it is feasible because the current wave of social innovation and social entrepreneurship, combined with new mobile communication technologies, can often overturn traditional medical paradigms, enabling service and product delivery to the hardest-to-reach children.

Tailor solutions to fit local contexts

Our third approach recognizes and leverages local knowledge and expertise while also strengthening the capacities of communities and local researchers. Recognizing and supporting local problem-solving capacity is important for two reasons. First, local people possess critical inside information about their own context, including incentives, disincentives, norms and practices. Second, local leadership and ownership is a key to lasting impact. UNICEF notes that community-based care may be “the most propitious way to improve environmental health and combat disease and undernutrition, [and] community solutions are highly cost-effective and, most importantly, open to all.”³⁰

Tailoring solutions to fit local contexts is attractive because the foundation already has significant on-the-ground experience in this area – an historical advantage on which to build. It is also appealing because we believe that many “best practices” in the field of global health fail to scale up simply because one-size solutions do not fit all. Mechanisms to deliver health services and products must be adapted to varied socio-cultural and economic contexts, and the best way to support such “tailoring” is to work with the people who understand their own context. Thus, to counteract vulnerability, we must listen creatively and help to build resilience in families, communities and local systems.

Expert insight

According to Lindsay Mangham-Jefferies and Kara Hanson of the London School of Hygiene and Tropical Medicine, five factors must be considered in scaling up health services: (1) community and household; (2) health services delivery; (3) health sector policy and strategic management; (4) public policies cutting across sectors; and (5) environmental and contextual characteristics.”

Link disciplines to create comprehensive solutions

Prioritizing multidisciplinary solutions is essential because it is difficult to make sufficient gains in child health unless other goals – for example, improving maternal health and providing clean water and sanitation – are addressed at the same time. This approach involves the creation of new partnerships across varied disciplines, for example linking health to engineering, law, agriculture or education.

It is also important to search for integrated solutions that address a broad set of “social determinants of health.”³¹ Social determinants of health include the conditions in which people live, such as where they were born, how they grew up, whether they were educated, where they work, and the supporting health systems from which they are served. These conditions are the result of resource allocation and access, and as such, are responsible for significant health inequities across the globe. To address such unfair and avoidable differences in health status, the UN Secretary-General encourages efforts to work across sectors and involve multiple stakeholders because “synergies across the goals are clear and indisputable [to] reduce costs, increase effectiveness and catalyze local action.”³²

Linking disciplines to create comprehensive solutions is attractive because the foundation has significant experience and historical advantage in projects of this kind. In addition, we believe it is exactly at the intersection of different disciplines that fresh ideas often arise to address old problems.

Opportunity areas

In order to ensure that our chosen approaches were sound, we first explored opportunities to address the five priority health conditions noted above (perinatal, respiratory, diarrhea, malnutrition and parasitic worms). For the sake of brevity, that analysis is not included here. We then mapped all child health needs (surviving childbirth, appropriate nutrition, protection from infections, and remaining free from injury and NCDs) against our four chosen approaches (adapt, bring, tailor and create comprehensive solutions). While cognitive stimulation is also an essential health need, this issue is covered in our Education Landscape as well as in our discussion of potential synergies among education, health and child protection.

We then selected three opportunity areas for the Optimus Foundation (see figure below). Our selection process was based on intensive desk research and our own professional judgment, guided by testing and feedback from external experts. The three opportunity areas for health are:

- First minutes of life
- Child-friendly care
- Tailored for kids and communities

While both injuries and NCDs are a significant and growing cause of child death and disability (especially among older children and teenagers), we decided not to include them as focal points for the foundation, given our limited resources and size, and the many other significant health challenges facing children under the age of 5. In addition, the remaining needs – including surviving childbirth, appropriate nutrition and free from infections – had greater synergies with our education portfolio and we believe there will be more opportunities to integrate solutions across the disciplines of health and education by refining our focus.

First minutes of life

Definition: The period surrounding birth – from the last weeks of gestation through the first weeks of life – is critical to child development. Perinatal conditions, including prematurity, low birth weight, birth trauma, asphyxia, and infections, are the single largest contributor to childhood death and suffering. In resource-poor settings, this is a time of greatly heightened vulnerability. This opportunity area combines all four approaches.

Opportunity areas in child health

		Needs			
		Surviving childbirth	Appropriate nutrition	Free from infections	Free from Injuries & NCDs
Approaches	Adapting solutions for children	First minutes of life	Child-friendly care		
	Bringing solutions to children				
	Tailoring solutions to fit local contexts		Tailored for kids and communities		
	Linking disciplines to create comprehensive solutions				

Rationale: There are clear entry points for action to reduce mother and newborn morbidity and mortality. For example, prematurity and low birth-weight can be reduced through maternal nutrition programs, while birth trauma, asphyxia and neonatal infections can be decreased by integrating maternal, obstetric and newborn care. To survive birth and the first weeks of life, appropriate health solutions must be adapted for and reach the most vulnerable children. In order for such interventions to be effective and sustainable, they must be tailored to local conditions by local communities and experts.

Child-friendly care

Definition: Many health tools – including medicines and diagnostics – have not been adapted or re-formulated to be safe and effective for children, especially those in low-resource settings. There is also a dearth of innovative delivery systems to ensure that solutions reach the children who most need them. Ways to achieve this include adapting health messages that are age-appropriate and solicit positive responses from children. This opportunity area covers two approaches: adapting solutions for children, and bringing solutions to the child.

Rationale: There are readily identifiable access points for the Optimus Foundation. For example, we can work with global partners to support the development of age-appropriate medicines and diagnostics. Special attention should be given to the development and delivery of low-cost point-of-care diagnostics to distinguish the causes of fever in order to provide proper treatment. New mobile health tools, bottom-of-the-pyramid business models, micro-franchising, social enterprises, and other “social innovations” need to be field-tested to identify the most cost-effective ways to deliver health services and products.

Current grantee spotlight: mobile phones giving health to moms and kids

Overview – The mCare project, recognized as one of the Top 11 Innovations in Mobile Health (mHealth) in 2011 by the Rockefeller Foundation and the mHealth Alliance, aims to validate the implementation and cost effectiveness of a simple mobile phone technology aimed at reducing maternal and newborn mortality in rural Bangladesh. Simple and readily available phones link pregnant women and information about their pregnancies to a local community health workers and an emergency neonatal care teams to reduce preterm and intrapartum deaths.

Partners – Johns Hopkins University in partnership with JiVitA, the Bangladeshi Ministry of Health and Family Welfare, and mPower Health

Beneficiaries – 25,000 pregnant mothers and newborns

Learn more – the project is featured in the 2012 special issue of the magazine of Johns Hopkins Public Health.

Current grantee spotlight: films that entertain and educate

Overview – “Magic Glasses”, is a project that aims to measure the efficacy of an educational cartoon designed to teach children, in an entertaining and locally sensitive fashion, how to avoid contracting intestinal parasitic worms. More than 100 million Chinese children are currently infected with parasitic worms, affecting not only their health but their educational attainment as well. To date, mass drug administration (MDA) has been the cornerstone of control as treatment is relatively cheap. However, MDA does not prevent re-infection, which means that the burden of parasitic worms persists in communities.

This project has developed and adapted a health educational film, called “Magic Glasses,” to augment MDA as a model for lasting and integrated control of parasitic worms. In early results, “Magic Glasses” intervention has shown a 50 percent efficacy in preventing further parasitic worm infection among school children, a 90 percent increase in knowledge about parasitic worms, and the proportion of students washing their hands after using the toilet increased by 200 percent.

Partners – Queensland Institute for Medical Research, Australia, in partnership with Hunan Institute of Parasitic Diseases, China, and local Ministry of Health and Education departments in Hunan Province

Beneficiaries – 2,000 children across 38 schools

Learn more – the project is featured in the August 2011 issue of the Optimus World magazine.

Current grantee spotlight: green roads to dengue control

Background – “Green Roads”, is a project that takes a different approach to eliminate dengue by involving those most vulnerable to the disease by teaching them how the disease is spread and in identifying practical ways to prevent the disease from ever occurring. With an estimated 2.5 billion people at risk of infection, dengue is one of the most devastating diseases carried by mosquitoes, and the number of infections have been on the rise worldwide over the past decade. In most countries, approaches adopted from Ministerial level guidelines, and those dependent upon pesticides have failed to curb the spread of dengue. Over the last 5 years, the UBS Optimus Foundation has supported a community-based intervention project that has shown very promising results among 23,000 people in Nicaragua, with indirect beneficiaries estimated at 220,000. Key to the project are the brigadistas, local community members who learn from experts about dengue and the mosquito-living environment and life cycle. The brigadistas then investigate the dengue infection rate and sources of the mosquitoes in their own neighborhoods. Depending on the neighborhood, different interventions have been implemented including school plays, church events, dances, rap songs, the development of business collectives to sell pupa-eating fish, clever use of local materials to cover water containers (to prevent mosquito breeding), and innovative new uses for old car tires (a notorious home for mosquito larvae when they fill with rainwater). Pilot results suggest that the “green roads” approach could reduce dengue by 60 percent under the conditions of a randomized controlled trial in Mexico and in Nicaragua, currently ongoing with results expected in 2013. The first year of peer-to-peer monitoring in the Camino Verde trial intervention sites in Nicaragua also found that the percentage of homes with mosquito breeding sites declined from 20 percent to 7 percent. In Nicaragua, the project is scaling up the community mobilization efforts in collaboration with the Ministry of Health, and the spill-over effects from dengue control to longer term economic growth are being measured. This approach is also now being replicated in Mexico, where dengue fever incidence is on the rise.

Partners – CIET in Nicaragua and Mexico, University of California, Berkeley, United States

Beneficiaries – More than 100,000 people, including approximately 40,000 children

Health need – Free from Infections

Approach – Tailor Solutions to Fit Local Contexts; Link Disciplines to Create Comprehensive Solutions

Opportunity area – Tailored for Kids and Communities

Learn more about the project at the “Case Studies for Global Health” (<http://casestudiesforglobalhealth.org>) or visit the “Camino Verde” project website (<http://caminoverde.ciet.org>)

Programs tailored for kids and communities

Definition: Evidence-based “best practices” may fail to thrive when transplanted into new socio-cultural and economic contexts. Only by working with local communities and experts who understand their own situation can we begin to develop and implement interventions that work. Multiple determinants of health (such as sanitation, education and food security) need to be considered to understand the drivers for a given problem and its potential solution. This opportunity area focuses on the need to engage and strengthen local expertise and leadership to address the complex determinants of child health.

Rationale: The key stakeholders and participants are oftentimes easily accessible and eager. Parents, community health workers, local teachers and experts from local universities can – with the right support and incentives – innovate, adapt and deliver locally appropriate solutions. Effective and sustainable solutions will also require attention across multiple disciplines, reflecting the complexity of local determinants of the health of vulnerable children. This opportunity area is especially conducive to synergies with the Optimus Foundation’s focus area on education.

Closing thoughts

The health field has made great strides over the past century. The explosive growth in specialized knowledge, and the accelerated speed of innovation, have given us powerful new tools to fight disease. Yet millions of children still suffer and die from preventable conditions. Certainly, more money, medicines, doctors, nurses and midwives would help – and governments and the private sector need to support them. We believe that foundations have a different role. We see ourselves as strategic investors in social and technological innovation to develop and test more effective and sustainable solutions.

We used this landscape analysis as an opportunity to identify priority health needs and potential solutions. This led us to three attractive and feasible opportunity areas that the foundation could pursue.

Opportunity areas in child health

First minutes of life – Addressing the needs of vulnerable children during the critical period surrounding birth with the adaptation and delivery of solutions for children as well as tailored solutions to fit local socioeconomic contexts.

Child-friendly care – Providing appropriate nutrition and care to prevent and treat infections – including redesigning or re-formulating health solutions to make them age-appropriate, and ensuring that health services and products can reach children in resource-poor, remote or inaccessible settings.

Programs tailored for kids and communities – Involving local communities and experts to address the multi-dimensional determinants of health to support the development of effective, sustainable and locally appropriate solutions addressing the health needs of vulnerable children.



Early diagnosis and treatment is key to improving worldwide health and limiting the devastating effects of illness as is known by these Ghanaian children and mothers, all of whom are former sufferers of Buruli ulcer. They are working with “Stop Buruli”, a multidisciplinary research effort to stop Buruli ulcer, a flesh-eating disease that can lead to significant disability and suffering if not treated early.



Child *protection*

Background

The UBS Optimus Foundation has been committed to child protection since its creation in 1999. In 2003, the Foundation Board decided to focus on protecting children from violence and sexual abuse. Today, the foundation supports three kinds of child protection projects: raising awareness in countries like Switzerland, Zambia, Malawi, Mozambique and Germany; delivering services in sub-Saharan Africa, Georgia, Russia and Belarus; and grants to generate new evidence, including the Children and Violence Evaluation Challenge Fund and the Optimus Study, both of which have a global focus. The current funding for child protection is approximately 5 million US dollars per year.

The child protection space is currently shaped by three trends that significantly impact our work and thinking. We believe all three trends are positive for the field. First, donors and practitioners are moving toward a systemic, holistic framework to address child safety, shifting away from project-oriented approaches. The second trend supports building a global evidence base on child abuse and its related consequences. The third is towards active engagement on the important topic of child sexual abuse, which – because it is uncomfortable and unpopular – has remained relatively invisible.

Leaders in the field agree that abuse cannot be viewed in isolation – it requires systemic and multidisciplinary solutions. A stronger evidence base is needed because, unlike health and education which have been relatively well-studied, the field of child protection is new. There is a dearth of evidence, best practices and codified approaches. Without key data, it is difficult to quantify the problem globally, inspire action and direct resources to programs that work. Active engagement is needed, including multiple stakeholders in advocacy and social marketing, to raise attention and change laws, increase resources, build awareness and encourage reporting – all to improve child protection.

Landscape scope and process

In 2012 we launched a child protection landscape to identify feasible and relevant opportunity areas that the Optimus Foundation should consider when setting its future strategy and determining program priorities. We present here promising ideas and entry points – and the rationale behind them. These opportunity areas will be considered further as part of our strategic planning process.

Key definitions

We began our child protection landscape by defining key terms. The definition of a child is anyone under the age of 18, according to the UN Convention on the Rights of the Child. Because children of all ages are vulnerable to maltreatment, our granting focus, and the focus of this landscape analysis, covers all children *aged 0–18*.



Community-based child protection is a low-cost way of reaching large numbers of children such as with these children in India.

Since child protection is a comparably new field, *vulnerability to abuse cannot yet be reliably assessed*. There are no vulnerability indicators as there are for child health and education. At present, experts believe that children are equally susceptible to maltreatment regardless of their socioeconomic status, home country or culture.

From a geographic perspective, we focused this landscape analysis on *all low- and middle-income countries, plus Switzerland*. Low- and middle-income countries are the subject of a forthcoming 2013 World Health Organization study assessing country readiness to implement child protection interventions. Switzerland is of interest because UBS AG (the bank) and the UBS Optimus Foundation are both headquartered in that country.

The state of child protection

Whether they live in high-net-worth families in the global North, or are orphaned by HIV/AIDS in sub-Saharan Africa, all children are vulnerable to abuse and neglect. Several statistics illuminate the severity of the situation:

- In 2002, 150 million girls and 73 million boys under the age of 18 experienced forced sexual intercourse or other forms of sexual violence.³³
- Each year, an estimated 500 million to 1.5 billion children experience physical violence.³⁴
- Between 133 and 275 million children worldwide witness domestic violence each year.³⁵
- In low- and middle-income countries, 3 out of 4 children between the ages of 2 and 14 experience some form of violence – physical punishment or psychological aggression – at home.³⁶

Children and communities are affected when children are abused

Child maltreatment has devastating effects on children and their communities, producing direct costs for affected individuals and indirect costs for the communities in which they live. The annual global cost of child abuse and neglect is estimated to be 104 billion dollars – or 0.7 percent of the US GDP.³⁷ These consequences can be broken down into five categories:

(1) Health: Compared to children who are well cared for, abused and neglected children are less healthy. The Adverse Childhood Experiences (ACE) study looked at people who experienced abuse, neglect, household mental illness, and household substance abuse.

According to ACE, people who experienced four or more categories of childhood exposure were 4–12 times more likely to be at risk of alcoholism, drug abuse, depression and attempted suicide; 2–4 times more likely to smoke and have poor self-rated health; and 1.4–1.6 times more likely to be physically inactive and severely obese.³⁸

They were also more likely to have a high number of sexual partners, and to suffer from sexually transmitted diseases.

According to the Australian National Child Protection Clearinghouse, child abuse and neglect are correlated with increased prevalence of public health problems, including community and domestic violence, delinquency, mental health disorders, alcohol and illicit substance use, obesity, suicide and teen pregnancy. These outcomes, in turn, correlate with increased utilization of public and private health services.³⁹

(2) Crime: According to a 1992 study by social science researcher Cathy Spatz Widom, children who are abused or neglected have an increased likelihood of being arrested as juveniles (53 percent), as adults (38 percent), and for a violent crime (38 percent).⁴⁰ More recent studies have found that victims of abuse or neglect are overrepresented among high-risk male juvenile parolees,⁴¹ and among both adult male and female offenders in state prisons.⁴²

“The best available research,” according to the National Institute of Justice, “tells us that crime victimization costs the United States 450 billion dollars annually. Rape is the most costly of all crimes to its victims, with total estimated costs at 127 billion dollars a year (excluding the cost of child sexual abuse).”⁴³ In 2008, researchers estimated that each rape in the US costs society approximately 151,423 dollars.⁴⁴

(3) Education: It has been well-documented that child victims of sexual abuse and violence have greater difficulty learning. They tend to perform less well on standardized tests and achieve lower grades, even when socioeconomic status and other background factors are considered.⁴⁵ Prospective studies have consistently shown that maltreated children have lower educational achievement than other children.⁴⁶

“When children drop out of schools as a direct consequence of violence, the economic growth of a country is at stake,” according to a 2010 report by UNICEF, Plan West Africa, Save the Children, and Action Aid. “Studies show that each year Cameroon, D.R. Congo and Nigeria lose 974 million US dollars, 301 million dollars and 1,662 million dollars respectively by failing to educate girls to the same standards as boys.”⁴⁷

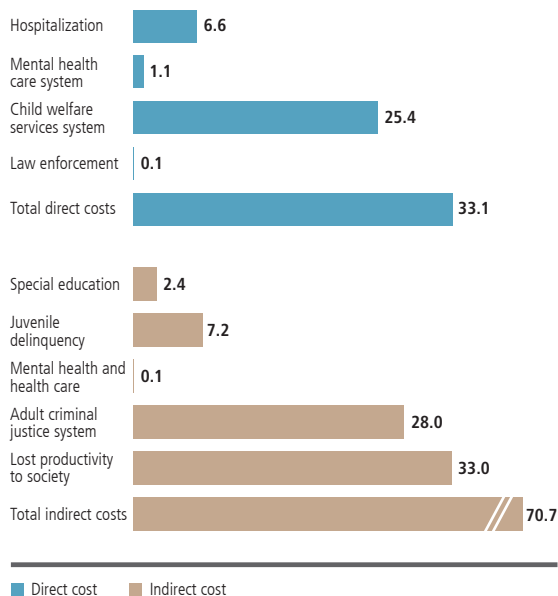
(4) Economics: Adults who were subjected to sexual abuse and violence as children often fail to succeed economically. “Sexual violence survivors experience reduced income in adulthood as a result of victimization in adolescence, with a lifetime income loss in the US estimated at 241,600 dollars.”⁴⁸ According to Watters et al: “Child abuse also reduces the lifetime productivity of its victims who do not die... it is reasonable to assume that five percent of lifetime earnings would be affected.”⁴⁹ Communities also experience profound economic consequences. Based on data drawn from a variety of sources, the estimated annual cost of child abuse and neglect in the United States is between 104 billion and 124 billion dollars.^{50, 51}

The total financial costs of just one year of confirmed cases of child maltreatment in the US are estimated to be 124 billion dollars, equal to 0.7% of US GDP.⁵¹

(5) Well-being: Not surprisingly, children affected by sexual violence and abuse suffer from tremendous stress and anxiety. According to Hagele, child maltreatment and the associated disruption of secure parent-child attachment represents a severe traumatic exposure comparable to military combat. While there are many exceptions, abused children often become abusive parents: “...Child maltreatment independently predicts later dysfunction in parenting, including the perpetration of severe physical maltreatment and inappropriate maternal dependence on children for emotional fulfillment, (contributing) to the intergenerational transmission of maltreatment.”⁵²

Costs^{1, 2} of child abuse and neglect

in USD billion



¹ This breakdown is taken from the Wang 2007 article estimating the cost of child maltreatment to be USD 104 billion. More recent reports by Fang et. al. suggest the overall burden to be USD 124 billion. ² Direct costs created when the incidence comes to the attention of officials. Indirect costs caused by the long-term negative impact of the incidents.

Sources: Total Estimated Cost of Child Abuse and Neglect in the United States (Wang, Holton); World Bank

The challenges of child protection

There are multiple reasons why child protection does not receive the attention and resources it warrants. Victims of abuse – especially when it is sexual in nature – often experience shame that prevents them from reporting crimes. Child abuse and neglect make people uncomfortable – no one likes talking about it, and political leaders are reluctant to be associated with it. The taboo nature of this problem is unique, impeding our ability even to assess the full extent of the problem. An Optimus Foundation study in China found “significant underreporting and missing recognition of the problem.”

To complicate matters, societies have different perceptions of abuse and neglect. Child marriage, for example, may be condemned by certain cultures, but it is traditional practice in some countries. These differences in cultural norms make it challenging to gain universal alignment on some child protection issues. In addition, child abuse and neglect often take place behind closed doors, at home and within families, or in secluded community spaces. With no public crime, many communities and officials prefer not to see the abuse of children.

Low reporting and low evidence of burden results in limited funding for child protection compared to other fields such as education and health. “Reliable data are relatively scarce,” according to the World Health Organization, which also notes, “(There is a) lack of basic knowledge and concepts such as common definitions, cross-national com-

parisons, how to measure the problem, context and risk factors of the problem, costs, context, policy and legislative data.”⁵³ For example, there are no clear risk factors for child abuse and neglect; this makes it difficult to identify constituents. Limited evidence on the magnitude of the problem fuels the cycle of limited attention and underfunding.

Defining the problem

Children are mistreated in numerous ways. UNICEF identifies factors relevant to the field of child protection including: armed violence; child labor; child marriage; recruitment by armed groups; child trafficking; lack of parental care; children with disabilities; family separation in emergencies; female genital mutilation/cutting (FGM/C); gender based violence in emergencies; landmines and explosive weapons; sexual violence; and lack of psychosocial support. Though seldom discussed and infrequently addressed at community and policy levels, child abuse is, according to Felitti et al., a silent killer and “one of the leading causes of illness and death.”⁵⁴

We evaluated each of these categories of child protection. Some – child soldiering, female genital mutilation, child trafficking and child marriage for example – are concentrated in specific geographic regions, which means they don’t affect all children equally. Others – including neglect, child labor and physical abuse – are openly discussed and not shrouded in secrecy. Corporal punishment already attracts significant donor attention and resources.

Young people between the ages of 0 to 18 will not be safe until all factors relevant to child protection are addressed adequately, but the Optimus Foundation sees sexual violence and abuse as one of the most important challenges where we can have an impact. Other forms of maltreatment are often linked to sexual violence and abuse. For example, a small portion of child trafficking is for sexual exploitation; whereas, most trafficking is for labor. The foundation will concentrate on these forms of maltreatment where they overlap with sexual violence and abuse. In addition, we will invest in addressing circumstances known to be linked to higher risks of being exposed to sexual violence later in life. All of the issues that challenge child protection broadly are more pronounced in the area of sexual violence and abuse: taboo, lack of political action, underfunding, a gap in knowledge and evidence.

What is child sexual abuse?

According to the World Health Organization: “Child sexual abuse is the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, for which the child is not developmentally prepared and cannot give consent, or that violates the laws or social taboos of society. Child sexual abuse is evidenced by this activity between a child and an adult or another child who, by age or development, is in a relationship of responsibility, trust or power, the activity being intended to gratify or satisfy the needs of the other person. This may include but is not limited to: the inducement or coercion of a child to engage in any unlawful sexual activity; the exploitative use of children in prostitution or other unlawful sexual practices; the exploitative use of children in pornographic performances and materials.”⁵⁵

Approaches

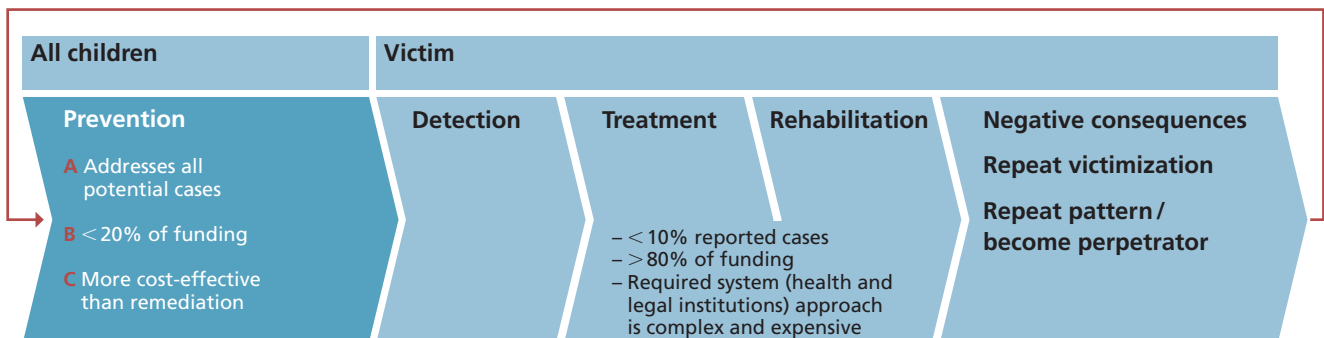
We considered several classification systems for approaches to address sexual violence and abuse: by “setting” (e.g. home and family, workplace, community, schools), by “intervention type” (e.g. behavior change programs, policy development, capacity enhancement) or by “stage” (e.g. segmenting the experience before, immediately after, and long-term impact following an incident of abuse).

We believe that focusing by stage provides the greatest opportunity to have a meaningful impact in this nascent field. This leads to three types of intervention: prevention, treatment, and rehabilitation and reintegration. Prevention includes both primary activities – anticipating problems before they arise and seeking to prevent their occurrence, and secondary activities – reducing the impact of serious risk factors that have already manifested. Treatment consists of therapeutic activities to address the physical and psychological trauma of abuse. Rehabilitation and reintegration emphasize reconciliation and helping abuse survivors become empowered members of society.

Considering interventions at these three stages, we chose to focus on prevention as the best approach to address sexual violence and abuse for three main reasons.

1. Due to tremendous underreporting of sexual abuse and violence – 98 percent of cases were unreported in Hong Kong and 95 percent were unreported in Switzerland – only a small number of cases are brought to the attention of officials.⁵⁶ Thus, only a very small percentage of cases are amenable to treatment. Prevention addresses all potential cases.
2. By averting problems before they develop, prevention is a highly cost-effective way to address child sexual violence and abuse. Investing in prevention – especially primary prevention activities that operate “upstream” of problems – is more cost-effective and has large and long-lasting benefits.⁵⁷
3. Unfortunately “prevention programs and victim services for all forms of child abuse are severely underfunded,” according to Alexander Butchart, WHO Coordinator, Violence Prevention.

Focus on prevention to address sexual violence



Expert insight

“There should be a clear focus on primary prevention because even in the best resourced countries, only a fraction of cases – three to ten percent – ever come to the attention of the authorities. The vast majority of victims remain invisible and anonymous.”

Chris Mikton, PhD, Violence Prevention, WHO.

Child protection needs: our priorities

Because child protection is a relatively new field, three basic building blocks are missing: skills, understanding of cause and effect, and evidence. Filling these gaps is absolutely critical to ensuring that children are protected against sexual violence and abuse.

“Many promising child abuse programs designed by NGOs and other organizations develop out of grassroots initiatives and involve professionals without backgrounds or education in research and evaluation,” explained David Finkelhorn, Director of the Crimes Against Children Research Center at the University of New Hampshire.

There aren’t enough trained, qualified professionals who can design and implement appropriate programs.

This lack of skills holds back efforts to address child sexual violence and abuse at every level – strategy, program design and program execution.

Because of the absence of skilled specialists and funding support, we are still not clear what works – and what doesn’t – when it comes to preventing child sexual abuse and violence. According to MacMillan et al., “Although a broad range of programs for prevention of child maltreatment exist, the effectiveness of most of the programs are unknown.”⁵⁸

Without information on the efficacy of prevention programs, implementers may choose inappropriate strategies with little utility. For example, in 2009 Davidson, Martellozzo, and Lorenz evaluated the Child Exploitation and Online Protection (CEOP) educational training package, “ThinkUKnow.” They found that program participants’ ability to recall safety messages appeared to fade over time. A high proportion of young people who had received the training were not even able to recall whether they had participated in the program.⁵⁹



It is through the eyes of children that we see the world in its purest form, and the environment must be rich in motives which lend interest to activity and invite the child to conduct his own experiences as noted educator Maria Montessori observed.

Opportunity areas

To address these gaps in the child protection field, we developed three opportunity areas for the Optimus Foundation. These opportunity areas will be used to inform the foundation’s strategic planning process and are illustrated in the figure below.

Strengthen capacity

There is no single profile of a child protection expert or practitioner, but everyone working in this field needs significant training. Experts we interviewed identified capacity strengthening of professionals as critical to alleviating child sexual abuse and violence. Building the knowledge and skills of funders and implementers – through training and continued learning opportunities – will enable the development of high quality projects that work. It is also absolutely critical to harness local knowledge and capacity where it exists – and enhance it where necessary. This will ensure that local communities help develop interventions and take the lead to implement them in a sustainable manner.

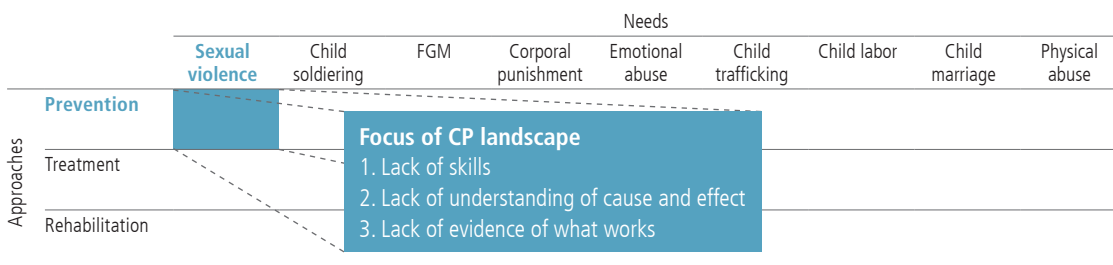
Current grantee spotlight: the child safe organization toolkit

Children can be abused anywhere services are offered: schools, medical clinics, hospitals, emergency shelters, while participating in extracurricular activities, and even while receiving humanitarian aid. To help ensure that institutions and organizations working with children uphold child protection principles, ECPAT (End Child Prostitution, Child Pornography, & Trafficking of Children for Sexual Purposes) created its Child Safe Organization Toolkit.

With a variety of materials to help organizations develop and improve policies and procedures on child protection, the kit focuses on six areas: recruitment, employment and volunteers; education and training; a professional code of conduct; reporting mechanisms (for concerns and cases) and referral systems; access by external visitors; and communications and written policy and procedures for institutions and organizations. In addition to helping organizations create and formalize their policies, the kit also creates public conversation and critical dialogue about sexual violence toward children.

The Toolkit is currently being implemented in The Gambia, Benin, Ghana, Zambia, Thailand, Vietnam and Indonesia where at least 30 partner agencies in each country are being trained.

Opportunity areas in child protection



Current grantee spotlight: the Optimus Study – a global examination of child sexual abuse

A multi-country initiative, the Optimus Study examines child sexual victimization in the context of other forms of maltreatment, enumerating children's risk and potential protective factors. This study is gathering evidence and conducting research on four continents, with the ultimate goal of creating an evidence base that can reduce the incidence of, and improve services for victimized children.

Research model – The Optimus Study integrates standardized population-based survey methods to determine the rates and context of abuse in a particular population. It also provides clarity on the number of sexual victimization cases that are brought to the attention of officials and examines the procedures that are used to assist victims and bring perpetrators to justice. Taken together, the data fulfill four purposes: providing insight into the effectiveness of current official response systems; helping to advance the field by providing officials with access to information; creating opportunities to reduce the incidence of child sexual abuse; and helping to optimize service response and delivery.

Project phases – The project is broken into three cycles. The first assesses the problem scope and nature, and evaluates the service system structure and processes. In the second cycle, the survey results are used to inform solutions and build momentum with key stakeholders who can assist with advocacy efforts and coalition building, and then implement solutions to address the problems identified. Finally, the third cycle assesses changes in the scope of the problem and evaluates improvements in services.

Completed work – Successful surveys have already been conducted in Switzerland and China, drawing attention to the magnitude of the problem in both countries and highlighting priorities to advance the child protection field. Studies in both countries confirmed considerable levels of child victimization, most of it unreported – further evidence that victimization affects all children regardless of their geographic location. Research also confirmed the negative consequences of this exposure, and identified different risk factors in these two countries.

Next steps – In 2012, the project will continue in China and Switzerland and also be expanded to Africa and Latin America.

Learn more – www.optimusstudy.org

Build a culture of evidence

When implementers pursue strategies based on anecdotal information and prevailing norms, they are often met with serious disappointment, supporting interventions that do not reduce the burden of child maltreatment.⁶⁰ Practitioners and funders may make erroneous assumptions about sexual abuse and violence – and then allow these assumptions to guide their work.

Unfortunately, low accountability defines the child protection field. Robust evaluations are the only way to determine what works – and ensure that what works can be scaled up. This is a particular challenge in the area where the foundation will focus. According to a WHO/ISPCAN publication, "...little attention in terms of research and policy has been given to prevention."⁶¹

Building a culture of evidence involves developing and spreading effective assessment tools, methods and best practice standards for problem scoping, solution prototyping, program piloting and scaling of proven programs. To do this, practitioners must leverage existing research, build new knowledge by integrating a research component into interventions, and build a robust global evidence-base on child protection by sharing their findings with the field. This requires the involvement of local community leaders to ensure that assessment and implementation plans are appropriate for their own contexts.

Manage knowledge, communicate and advocate

Building a nascent field like child protection requires an upfront investment in developing, spreading and harnessing knowledge. But developing this culture of evidence isn't sufficient. There also needs to be a concerted effort to synthesize information, codify and communicate knowledge in a way that is accessible and credible for a range of stakeholders. The next step is to leverage that knowledge and use networks to reach policymakers and other influencers. This will ensure more support for the field, better and properly enforced regulations, and a coordinated system which does not tolerate sexual abuse of children.

Closing thoughts

We identified sexual violence and abuse as the foundation's focus within the field of child protection. We also identified prevention as the stage where we can have the greatest impact since all potential victims are included. Because child protection is a relatively new field, it is inhibited by the absence of three fundamentals: skills, evidence, and understanding of cause and effect. We developed three feasible and attractive opportunity areas to address these gaps, and tested our hypotheses with experts. These three opportunity areas exhibit meaningful overlap with our current child protection portfolio, and offer a starting point for development of the next UBS Optimus Foundation strategic plan.

Grantee spotlight: Preventing sexual abuse by improving mothers' parenting skills

Problem – Domestic violence and sexual abuse are widespread phenomena in Nepal (documented by the UN study on violence). Being directly or indirectly a victim of sexual violence can deeply affect a child's emotional and social behaviors. Parent-child interactions are essential to prevent violence and sexual abuse.

Solution – Prevent sexual abuse by supporting mothers' parenting skills, since mothers have a major role in families' dynamics affected by sexual abuse. Replicate a proven model in Spain based on the theory that good treatment and supportive family relationships can build resilience against violence and sexual abuse. Identify and disseminate the project's impact and effectiveness in Nepal.

Partners – BICE (International Catholic Child Bureau), Institute for Training and Research on Resilience and Violence and its Consequences (IFIV), Social Service Department University in Nepal, Aawaaj.

Opportunity areas in child protection

Strengthen capacity – Develop the skills of funders and implementers through training. Harness and enhance local knowledge and capacity.

Build a culture of evidence – Develop assessment tools, methods and best practices for the field. Leverage existing research, integrate a research component into implementation projects, involve community leaders and make evidence-informed decision making the norm for this sector.

Communicate what works – Develop, codify and disseminate knowledge to all stakeholders in order to advance the state of this sector, improve policy and practice, promote more funding and provide greater legal protection for children.



Child *education*

Background

The UBS Optimus Foundation has had a long-standing interest in global education. Our first grants in this field supported access to education and vocational training, but we adjusted our focus in 2009, prioritizing early childhood care and education (ECCE). Within the ECCE category, we currently make grants in three areas which 1) support programs to improve ECCE quality; 2) link cognitive stimulation and health in early childhood; and 3) link education and child protection in early childhood. The current annual funding for education grants is approximately 7.6 million US dollars.

Our education work is influenced by three major trends, all of which appear to be positive for the field. First, stakeholders are increasingly focused on delivering improved learning outcomes for children rather than simply providing access to education. This focus on learning outcomes is important for several reasons. It is an unfortunate reality that even if students attend school, they may not be learning. Enrolled students fail to learn if schools lack critical infrastructure, teachers are not motivated, or parents do not – or cannot – support study at home (“homework”).

The second trend finds donors and practitioners paying increased attention to the hardest-to-reach children. Some are living in physically remote rural locations; many are in somewhat more accessible but difficult environments such as urban slums. Wherever they are, these are the children who haven’t been included in past education programs. Efforts are now focused on ensuring that even the hardest to reach children are provided quality educational opportunities.

Third, there is growing interest in linking health with education, especially in early childhood. Research demonstrates that model programs in low- and middle-income countries combining nutrition, psychosocial stimulation and basic healthcare achieve the greatest impact with disadvantaged populations.⁶² For example, treating intestinal worms – which infect a quarter of the world’s population with high prevalence among school-age children⁶³ – in schools makes a great deal of sense.

In Kenya, one study compared children who received deworming pills for one year with another group that received treatment for two years. The children with the two-year intervention stayed in school longer and also went on to earn 20 percent more when they reached young adulthood.⁶⁴ Health and education are also linked in many Latin American countries where preschool students receive school-based meals sprinkled with micronutrient packets.

Landscape scope and process

In 2012 we conducted a child education landscape analysis to identify feasible and attractive opportunity areas for the Optimus Foundation to consider when setting its foundation strategy and determining future program priorities. Here, we present promising ideas and entry points – and the rationale behind them.



Access to quality education is a major challenge for children growing up in remote settings like these boys in Afghanistan: the trip to and from school can take hours each day, and there is no guarantee that upon arrival they will find a well-trained and motivated teacher ready to teach them.

Key definitions

We began the child education landscape by defining key terms. The United Nations Convention of the Rights of the Child defines a child as anyone under the age of 18. While we are passionate about education for all children, we place a strong emphasis on children *under the age of 8*. It is well-demonstrated that the greatest opportunity for impact arises from early childhood programs in this age range. According to *The Lancet*, “Early childhood is the most effective and cost-efficient time to ensure that all children develop their full potential.”⁶⁵

To define *vulnerability*, we consulted four indices which assess dimensions of poverty and educational success. The Bristol Child Deprivation Index and the Oxford Multidimensional Poverty Index (MPI) both take a multi-dimensional view of poverty and can be disaggregated to focus on education-specific deprivation. Bristol measures numerous characteristics, including “formal education.” The MPI covers 10 deprivation indicators, with two – “years of schooling” and “school atten-

dance” – focused on education. We also consulted UNESCO Statistics on the number of school-age children who are not in school. Finally, we examined the UNDP International Human Development Index (HDI) which measures health, education and living standards. The HDI’s education dimensions include mean years of schooling for adults, and expected years of schooling for children.

Applying these four indices helped us to define a set of sample countries for further analysis. Based on educational vulnerability indicators, 14 nations – *India, Ethiopia, Nigeria, Bangladesh, Tanzania, China, Pakistan, D.R. Congo, Niger, Chad, Afghanistan, Mali and Colombia* – immediately stood out. To this list we added two Latin American countries – *Brazil and Mexico* – where UBS has a strong presence and the potential to leverage its influence on behalf of vulnerable children. *Egypt* was also included to represent the North Africa/Middle Eastern region. More than 70 percent of the world’s educationally vulnerable children live in these 17 sample countries.

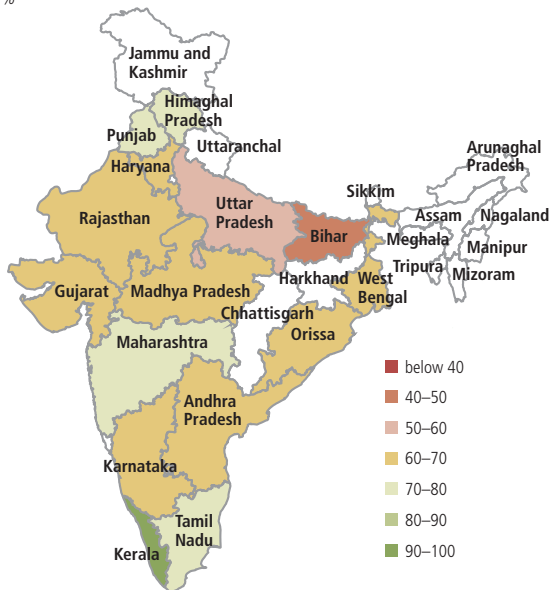


Our analysis also demonstrated that there are huge education differences within countries, especially in middle-income countries. India is a good example. Despite its progress toward certain Millennium Development Goals and its recent reclassification from low-income to middle-income status, the sub-continent contains large pockets of illiteracy. Some regions have literacy rates below 40 percent, which is worse than in many low-income countries.

To ensure that we reach the most vulnerable populations, we included a number of middle-income countries with significant internal educational disparities. These include Brazil, China, Colombia, India, Mexico and Pakistan. The rapidly changing geography of global poverty – 72 percent of the world’s poor now live in middle-income countries – reinforced this decision (low-income states were home to 93 percent of the world’s poor just two decades ago).⁶⁶

Literacy rate map illustrates pockets of poverty in a middle income country

in %



Source: Census India Maps 2001

Select terms in the education field

As discussed in the next section, educational vulnerability stems primarily from three factors: lack of readiness for learning, lack of access to education, and low quality education. Here, we define key terms that reflect these factors and that will be used throughout this report:

Early Childhood Care and Education (ECCE) – The period designated as early childhood begins at birth and continues through the eighth year of life. It is the most critical period for brain growth and has significant impact on the child’s future overall well-being. Successful ECCE programs follow an interdisciplinary approach and focus on health, nutrition, education, living conditions, child protection and social welfare. In addition to pre-primary schooling, usually beginning at age 3, ECCE focuses on the links between a young child’s cognitive, social, and emotional development and the institutions or individuals required to deliver care.

Education for All Initiative (EFA) – Launched in 1990, this initiative was designed to bring the benefits of education to “every citizen in society.” A coalition of national governments, civil society groups and development organizations including UNESCO and the World Bank committed to “ensure that by 2015 all children...have access to and complete, free, and compulsory education of good quality.” EFA also includes a commitment to “expand and improve comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children.” In 2000, 189 countries adopted two EFA goals, which are also among the Millennium Development Goals.⁶⁷

Access to Education – This term refers to students’ ability to access appropriate educational institutions, materials and personnel.⁶⁸

Educational Attainment – Often the focus of governments and donors – and frequently measured as matriculation grade – educational attainment refers to the highest grade an individual has completed or the most advanced level attended in the educational system of the country where the education was received.⁶⁹

Educational Achievement – This refers to a set of capabilities – literacy, numeracy, cognitive skills, critical thinking, knowledge, and socialization – that a child has acquired at any stage and that influence his or her ability to be a productive citizen.⁷⁰

The state of education for vulnerable children

There are approximately 1.8 billion school-aged children in the world today, and more than half of them do not receive basic quality education⁷¹. Lack of access to adequate education fuels and facilitates the cycle of poverty. For the poorest children, poverty is both a cause and consequence of lack of education. Several statistics illuminate the severity of the situation:

- In the developing world, one third of all children below the age of six will start primary school with their bodies, brains, and long-term learning prospects permanently damaged by malnutrition and ill health.⁷²
- “The number of children out of school is falling too slowly. In 2008, 67 million children were out of school.”⁷³
- If progress does not improve, *there will still be 56 million primary aged children out of school by 2015*. Of these, 23 million will be in sub-Saharan Africa and a majority will come from marginalized communities, especially those affected by conflict.⁷⁴
- Millions of children leave school without acquiring basic skills. In some sub-Saharan African countries, young adults with five years of education have a 40 percent probability of being illiterate. In the Dominican Republic, Ecuador and Guatemala, less than half of grade three students had more than very basic reading skills.⁷⁵

We identified a number of barriers to education in low- and middle-income countries. The enormity of some of these barriers – poverty, for example – require enormous structural, political and economic changes that exceed our resources. Wars, conflicts and natural disasters often prevent children from attending school and result in exclusion of certain groups. Gender norms, discrimination and ethnic marginalization exacerbate educational attainment of particular populations.

Through this analysis, we identified several barriers that could be addressed by the Optimus Foundation. These are described below.

Child education barriers: our priorities

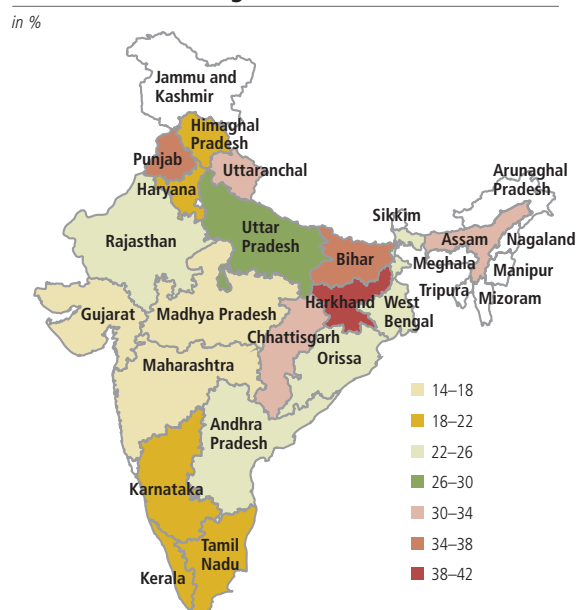
Teachers aren't teaching

Children cannot learn if teachers do not teach. Too often, teachers fail to show up for work; teacher absenteeism is a serious but neglected issue within the education field. In 2002 and

2003, the World Bank examined this problem in six countries – Bangladesh, Ecuador, India, Indonesia, Peru and Uganda – and found that, on average, teachers miss one day of work each week. The situation is worse in Uganda and India where the ratio is one day in four. In India, the researchers noted that instead of teaching, teachers are often reading a newspaper, drinking tea or socializing with colleagues.⁷⁶ And there are scant consequences for delinquent teachers: “only 1 in 3,000 headmasters had ever fired a teacher for repeated absences.”⁷⁷

This problem is attributed to a lack of accountability, incentives and motivation. Teachers have relatively low social status in many communities, which has a negative influence on their behavior. In many regions, especially remote regions, there are few candidates for the job, and teaching is often considered “employment of last resort” for university and secondary school graduates.⁷⁸ Teachers are often poorly compensated, and many need to secure additional income from private tutoring and other activities.⁷⁹ When educational reforms take place, teachers may be assigned additional workloads without additional compensation or acknowledgment. This further reduces motivation and engagement, and presents an additional challenge.⁸⁰

Teacher absence in government schools



Source: World Bank study by Chaudury et al, 2006

Parents have no faith in education

Teachers aren't the only ones who may lack motivation. Some children aren't being sent to school because their parents have no faith that education is a worthwhile investment. *Some parents may believe that existing primary education holds little value*, and that secondary education is only useful for securing government employment. In some communities, parents do not see schools as part of their community nor do they feel they can exert influence over what happens in them.⁸¹ "In the eyes of many low-income families in rural areas, schooling has become a system of extracting a small minority of the youth from their local community, leaving behind little of local value for those who do not pass the stringent selection exams, and, in many cases, alienating those who do leave their culture of origin."⁸²

But even if parents value education, the *immediate opportunity costs are often too high*. Children provide a valuable labor source for the poorest families. They tend agricultural crops, herd live-stock, care for younger siblings and elders, or participate in unskilled labor. Under these circumstances, time spent in school isn't necessarily viewed as a good investment, and the future payoff from the student's potential earnings doesn't help the family today. Furthermore, future earnings of educated persons, such as teachers, are in many cases still lower than earnings for professions which require no formal education, such as factory work.

The *actual cost of schooling may be prohibitive* as well. Many "free" public schools have hidden costs including the need to purchase uniforms, books and other supplies. Considering the opportunity costs, and actual costs, many parents make a rational choice not to send their children to school.

Gender norms are also a significant factor in some cultures. When parents can only pay for one child, they will often send their son, making it extremely difficult for girls to complete the full school cycle in many societies. This is doubly unfortunate because research has shown that the children of literate mothers have significantly higher educational outcomes (when all other factors are controlled).

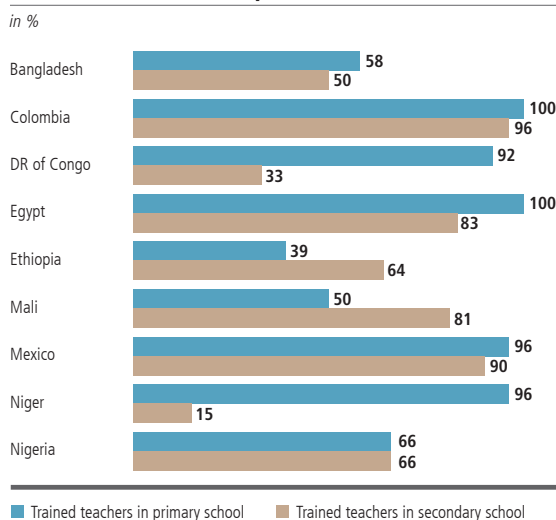
Teachers lack basic skills

Many countries do not provide adequate training or continuing education for teachers. The result is classrooms filled with ill-equipped educators who lack theoretical and practical skills to engage and challenge their pupils. "Teachers are often only slightly better educated than their students; in primary schools in some African countries (for example, Madagascar and Malawi) most teachers have only had two years of secondary education."⁸³

Successful education systems must support both basic and ongoing teacher training. This is critical to achieve the required minimal quality standard and to ensure that teachers have the necessary skills to teach specific class levels and student segments.⁸⁴

Unfortunately, comprehensive teacher training is virtually non-existent in many low- and middle-income countries.

Trained teachers (sample countries, 2011)



Source: UNESCO Statistics 2012

Inadequate systems and infrastructure

The availability of schools and skilled, committed teachers isn't enough. Poorly managed education systems – marked by an absence of strategic thinking and leadership, often subject to disruptive and frequent policy changes – do not serve students well. Schools need strong leaders and advocates, sufficient and steady budgets, efficient and effective policies, and effective management and accountability systems to realize success in the classroom.

When schools are poorly organized, and teacher compensation systems are mishandled, students suffer. "Teacher management at the national and sub-national levels is nothing short of chaotic in many countries... . In some sub-Saharan African countries, teachers regularly miss classes because they have to travel regularly to the capital to collect their own salary."⁸⁵ Generally, ensuring regular pay of the teachers' monthly salary appears to be a serious challenge for various governments".⁸⁶

Learning is also seriously limited when teaching materials, books, supplies, basic amenities and curricula are insufficient, inappropriate or otherwise ineffective. "Because in many developing countries, both the curriculum and the teaching are designed for the elite rather than for the regular children who attend school, attempts to improve the functioning of the schools by providing extra inputs have generally been disappointing."⁸⁷

Many classrooms are overcrowded with as many as 100 pupils per teacher. In addition, many schools suffer from unsafe water, inadequate sanitation and poor hygiene facilities. This affects the health and safety of children as well as their educational achievements. Corporal punishment, marginalization and humiliation by teachers and other students can also contribute to making schools stressful places where children do not want to go.

Needs: defining the problem

These barriers to education for vulnerable children result in three main problems that help to explain why children do not thrive under the current circumstances:

1. Children are not *ready* for the transition into primary school
2. Children lack *access* to schools
3. Children are not getting *quality* education

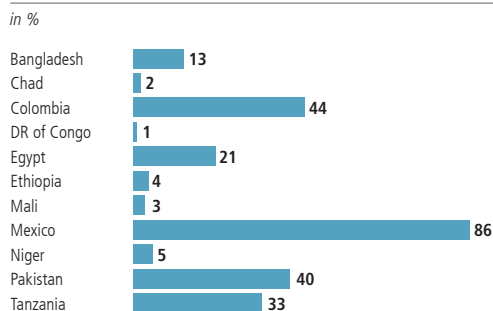
Getting children ready to learn

Educational *readiness* reflects a child's age-appropriate ability to engage in and benefit from initial learning experiences. These abilities include social and emotional skills, cognitive skills and general knowledge, language skills, physical well-being and motor development. All are critical prerequisites for children to succeed in the first years of primary school. Readiness is essential for long-term educational success. Children's readiness for school has a positive influence on children's overall educational accomplishments over the course of their entire lives, which go beyond the mere learning experience in a formal school setting.

Mental and physical stimulation during early childhood is essential: the period from birth to age 8 is the most critical period of growth and learning in a person's life.⁸⁸ Unfortunately, "early childhood care and education (ECCE) programs generally do not reach the poorest and most disadvantaged children who stand to gain the most from them in terms of health, nutrition and cognitive development." The situation is particularly grave in south Asia and sub-Saharan Africa where "over 200 million children under 5 years are not fulfilling their developmental potential."⁸⁹ Such children are insufficiently prepared for formal learning, and unable to benefit fully from subsequent schooling.

It is important to note that while middle and upper class children may achieve readiness outside of formal school settings – through appropriate stimulation and care at home or in their communities – poor children often live in environments where this is not possible. For them, ECCE programs are essential, but often unavailable. UNESCO data on pre-primary (day care) enrollment can be used as a proxy for broader ECCE access. In 2011, only five percent (or less) of children in Chad, D.R. Congo, Ethiopia, Mali and Niger were enrolled in pre-primary centers.

Net enrollment rates in pre-primary school of age group (sample countries, 2011)



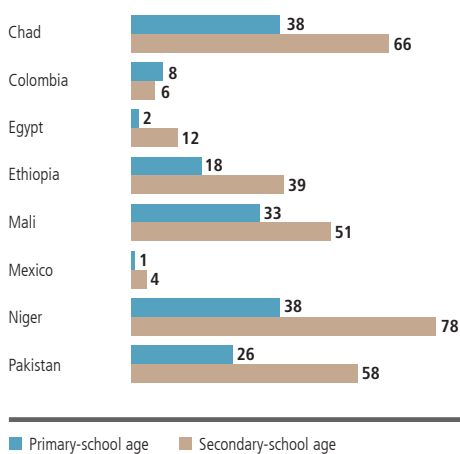
Source: UNESCO Statistics 2012

Ensuring access to education

We believe that all children – regardless of socio-economic status, ethnicity, location, religion, gender, physical characteristics or political status – should be able to take advantage of appropriate educational opportunities. *Access* to education also means that children must be able to reach schools without being harmed, and they must feel safe – free from actual or perceived violence or abuse – once they arrive. Unfortunately, this is the exception, not the norm, for many children.

Children out-of-school (sample countries, 2011)

in %



Source: UNESCO Statistics 2012

Despite widespread global commitment to the *Education for All (EFA)* initiative, too many poor and marginalized children are still out-of-school. Such absenteeism is attributed to any number of causes including distance to schools, schools that are isolated or in dangerous locations, and schools that lack sufficient facilities such as bathrooms (which means that children, particularly menstruating girls, cannot comfortably attend). Teachers may be abusive. Family responsibilities including work and caretaking may prevent children from attending school. The list goes on...

As illustrated in the figure above, the situation is bleak in many countries and unless critical action is taken, the future may be even bleaker. The 2011 UNESCO EFA Global Monitoring Report concludes that if current trends continue, there could be more children out of school in 2015 than there are today.⁹⁰

Ensuring quality education

Quality education requires adequate educational resources (books and other teaching materials and supplies), stimulating and relevant curricula, proper organization (performance monitoring and small class sizes), as well as competent and respectful teachers. Improving the quality of learning, according to UNESCO, is extraordinarily difficult but absolutely essential to reaching universal primary education.⁹¹

Merely attending school is not enough. Even when children enroll in primary school, millions enter late, drop out early, or never complete a full cycle. Poor teacher quality and a lack of educational materials exacerbate the problem. As a result, many children with access to education still do not acquire basic skills to become successful adults. Recent studies reveal the global extent of this problem.^{92 93 94} For example, in some countries in sub-Saharan Africa, young adults with five years of education had a 40 percent probability of being illiterate.

Low educational achievement also impacts self-esteem and motivation. "A child who expects to find school difficult will probably blame herself and not her teachers when she can't understand what is being taught, and may end up deciding she's not cut out for school – 'stupid,' like most of her ilk – and give up on education altogether."⁹⁵

Approaches

Thus, we have identified and are committed to addressing the key needs of readiness, access and quality for vulnerable and hard-to-reach children. Considering the many barriers that stand between such children and educational achievement, we selected three philanthropic approaches that are attractive and feasible for the Optimus Foundation to pursue. These are: behavior change programs, capacity enhancement and skills development, and enabling systems and infrastructure development – three of "the 6 types of social intervention" described in a recent McKinsey publication, *Learning for Social Impact: What Foundations Can Do*.⁹⁶

Motivate change

The first approach focuses on shifting the way all stakeholders behave towards education, creating an environment in which both giving and receiving an education is more highly valued and encouraged. Behavior change happens when people are motivated by opportunities and incentives, or new information, to adjust their mindset, make different choices, and take new action. In many cases, various incentives in education are known, but need to be adapted to new local contexts.

Incentives can be either financial and non-financial though financial incentives get the most attention. For example, one study found that when teacher compensation was linked to attendance, teacher absenteeism fell from 42 to 21 percent. Students also benefited, obtaining higher test results which facilitated their entry into better schools.⁹⁷ Financial incentives can also motivate parents to send their children to school. For example, Mexico's Oportunidades program provides conditional cash transfers to parents who send their children to school and who get their children vaccinated.⁹⁸

Non-financial approaches also work. For example, mothers' groups can be powerful and cost-effective vehicles for change. When women convene regularly, they work together to overcome shared difficulties and create better futures for their entire families. The group format is an efficient delivery model which encourages knowledge sharing to affect change. Other examples include the use of locally relevant curricula – based on local traditions rather than imported textbooks – as an incentive to motivate attendance and attention in class.

For educators, accountability helps strengthen capacity within the system. The Indian NGO Pratham sets a nationwide benchmark for education in its Annual Status of Education Report (ASER survey). This report allows teachers, school personnel and parents to monitor school performance. Results are published in the national press, encouraging schools to raise their standards. In Uganda, the introduction of school scorecards with community monitoring has resulted in improved pupil test scores, and increased pupil and teacher attendance.

Strengthen human and organizational capacity

The second approach focuses on developing, adapting, and testing new and alternative ways to strengthen stakeholders' skills and knowledge. While respecting local expertise, indigenous knowledge and community traditions, it is possible to bring new information and techniques that help children prepare for school and help schools prepare for children.

For parents, this can mean improving critical care skills through instruction about their children's feeding, learning and emotional needs. Interventions can also promote parents' responsiveness and attachment, encourage reading and play, and suggest positive approaches to discipline. To work well, good parenting programs need to be adapted to fit local sociocultural contexts.

For teachers and school administrators, various interventions are well-known but need to be adapted to local contexts. For example, training-the-trainer programs for continuing education of teachers have been shown to be effective in different settings. Other interventions have not yet been developed or perfected, for example to make the most effective use of new information and communications technologies to improve teachers' skills.

Develop enabling tools

The third approach focuses on developing, adapting and testing new teaching tools, models and systems that contribute to an enabling environment for children's education. The focus is on improving the "infrastructure" – including course materials, curricula, teaching tools, educational software, teacher performance management systems and business models – needed to help teachers teach and students learn, and for schools to be managed more effectively.

For communities, an innovative method of instituting daily payment of school fees, with no hidden extra costs (fees include uniform, food, transport, books, etc) has been shown to widen access to those who would normally be out of school or in government schools. Managing a smaller daily cash flow is an enabling tool for children to go to school without the sudden financial shock associated with buying uniforms, books and school supplies (and teacher "fees" even in supposedly free government schools).⁹⁹

An integrated cloud-based school management system is a new enabling tool for educators, with a database of all students available online. Staff equipped with portable tablets can track attendance, students test results and payments more effectively.

Sometimes this requires rethinking assumptions about education for vulnerable students. Other funders and local governments focus on building schools and hiring teachers to improve access to education. This is a necessary first step, but not our role. Our goal is to help create an environment in those schools that enables children to learn.

Opportunity areas

To identify opportunity areas where the Optimus Foundation might focus in education, we mapped needs (readiness, access and quality) against the three approaches (motivate change, strengthen human and organizational capacity, and develop enabling tools). The following opportunity areas represent a set of attractive and feasible options for the Optimus Foundation (see figure below).

Motivating early education

Definition: This Opportunity Area involves adapting known incentives to new local socioeconomic contexts, and testing their effectiveness in motivating parents, communities and educators to improve early childhood emotional, social and cognitive development. Non-financial incentives may include information and evidence; recognition of innovative achievement by groups or individuals; development of locally relevant curricula; mentoring; and peer leadership training. Financial incentives may include conditional cash transfers, vouchers, and approaches to lower tuition fees or to disperse hidden school costs over time in order to reduce financial burden.

Rationale: Early childhood interventions have demonstrated a high social return, but they are very dependent on parental involvement and community engagement. Too often, parents and communities lack information, incentives, resources and opportunities needed to prioritize or adequately support early childhood education. While the elements of behavior change have been well studied, most of the research has been concentrated in high-income countries.

Grantee spotlight: “Fair start – Turkey” and motivating ECCE

Problem – 30 percent of people in Turkey reside in rural areas. They have significantly lower incomes, less access to education, and lower health indicators than the general population. More than 1 out of 4 women in rural areas have never had any form of schooling. Hygiene standards are extremely low – only 41 percent of toilets are connected to a drainage system. One out of 3 children living in rural Turkey are not vaccinated against common childhood diseases, and infant mortality in rural areas is 10 times higher than the national average.

Solution– The Turkish NGO, Mother Child Education Foundation (ACEV), strengthens the skills of parents and teachers in impoverished rural communities to help prepare young children for formal school settings. It brings together mothers’ groups as the delivery point for training and skills building. The program has demonstrated measurable results including improved hygiene through increased hand-washing, and reduced corporal punishment. Fathers are engaged through traditional coffee-house meetings. ACEV also builds bridges between mother groups and government initiatives, and helps motivate preschool teachers and school administrators.

Beneficiaries – This project reaches 1,880 children between 5–6 years old who are enrolled in preschool classes in 24 villages in Central Anatolia, and provides indirect benefits to an additional 2,430 children between 0–6 years old.

Opportunity areas in education

	Readiness	Access	Quality
Motivate change	Motivating early education		
Strengthen human and organizational capacity	Children fit for school		Schools fit for children
Develop enabling tools			

Children fit for school

Definition: This Opportunity Area involves developing, adapting and testing the effectiveness of innovative new ways to stimulate emotional, social and cognitive development during early childhood. The focus is on strengthening the skills of parents, communities and educators, and improving systems and processes to create the right environments for early childcare and education. For example: good parenting programs linked to community preschools; innovative transition models; networks and communities-of-practice for pre-primary centers and staff; and micro-franchise crèche models.

Rationale: Parents and communities need skills to contribute to children's emotional, social, and cognitive development, enabling a smooth transition from community to primary schooling. This fragmented area currently receives little donor or local government support. There are several interventions that can help to promote student readiness. These include good-parenting programs, which are linked to community preschools and primary schools.

Schools fit for children

Definition: This Opportunity Area involves developing, adapting and testing the effectiveness of innovative new ways to improve child achievement in literacy, numeracy, critical thinking and socialization. The focus is on strengthening the skills of teachers and school administrators, communities and parents, and improving systems and processes to create enabling environments for quality education. For example: educational methods and materials (including software) for children, and for teacher training; community school/low-cost private school federations; train-the-trainer programs for teachers; and school performance management & accountability systems.

Rationale: To ensure that schools serve children of all ages, there must be a focus on quality education. Clear metrics must be in place to ensure that children achieve tangible outcomes and advance to new learning levels.

Within this opportunity area, we aim to strengthen the skills of teachers and school administrators, and to improve underlying education systems and processes, including school management. Schools must be staffed with sufficient competent teachers and shaped by beneficial policies that support student achievement in literacy, numeracy, critical thinking, and socialization.

Grantee spotlight: "Preschool for all children – Madagascar"

Problem – In Madagascar, primary education is compulsory between the ages of 6 and 14. Children under six represent 20 percent of total population, but in 2008 the government spent only 0.05 percent of its total budget on education, and only 0.22 percent of that on Early Childhood Education. National guidelines for early childhood education have not been formalized. Only 7.3 percent of three to five year olds have access to preschool, mostly in urban areas. Madagascar has 3,275 preschool centers, but only 200 of these are in the public sector. Private preschools are prohibitively expensive for most parents – two thirds of whom live below the poverty line.

Solution – The Swiss NGO Aide et Action helps children acquire knowledge and life skills at an early stage, preparing them for school and supporting them during the first years of primary education. This Early Childhood Care and Development (ECCD) project places a strong premium on parents, who are seen as critical to their own children's education. Researchers are working to link public and community preschools, and to build partnerships between the Ministry of Education, local communities, preschool educators and school headmasters. Their primary focus is on semiurban and rural communities.

Beneficiaries – Through our support to this project partner, roughly 7,000 small children from resource-poor communities are enrolled in ECCD programs – half of them young girls. Locally appropriate preschool training schemes have been developed. Long term goals are to build strong community consensus on the importance of preschool education, and to increase funding and improve management of preschools by the Government.

Grantee spotlight: “Access to quality education in India and Ghana”

Context – Recent research across India and sub-Saharan Africa has revealed an extraordinary phenomenon: poor families are sending their kids to private schools in huge numbers. This is due to the emergence of private schools that charge very low tuition fees and are affordable to families on the poverty-line. More than 2/3rds of all school-age children in poor urban areas of sub-Saharan Africa and India now attend low cost private schools (25–33% in rural areas). In impoverished areas of China and India, researchers have discovered thousands of such schools where none “officially” existed – and measured educational outcomes far higher than local public schools (which often suffer from teacher absenteeism, poor teacher training and low school management quality).

Challenge – Quality varies enormously among low cost private schools. Support is needed to improve teaching and “business models” for such schools in order to increase access to quality education for poor families. Low cost private schools remain controversial in the education field. Therefore, rigorous testing is needed to validate alternate models (e.g., micro-franchises; pooled procurement of quality teaching materials; and comprehensive daily or weekly fees to avoid financial shocks from annual or monthly tuition fees, the purchase of uniforms, books and other school materials).

Project – This project strengthens local chains of private schools to provide quality education for poor families in Ghana and India. It uses a three-pronged approach to improve the quality of learning. First, it provides tools including locally relevant curricula, assessment methods, lesson plans and teacher manuals – a “school-in-the-box” model. Second, it strengthens skills by training teachers, supervisors and school managers from the local community. Finally, it offers quality schooling that is affordable to poor parents. The vision of the project partner is to create a global movement of small “franchise” chains of low cost private schools. The project also includes an evaluation to test children in project schools and control groups (local public schools as well as other private schools) to measure the impact of this intervention.

Beneficiaries – 18,240 children enrolled in 34 schools in Ghana, and 8,000 children enrolled in 20 schools in Andhra Pradesh, India (at least five percent of children – all from the lowest wealth quintile – will be on scholarships).

Closing thoughts

Vulnerable children are not ready for school; they lack access to education, and they are disadvantaged by low quality educational opportunities. A number of key barriers prevent vulnerable children from receiving a quality education. Parents, communities and teachers may not value education and are not motivated to provide high quality educational opportunities for children. Insufficient resources, low human capacity, poor supervision, and inappropriate didactic tools all result in a low quality educational experience and low-performing schools that produce students with insufficient numeracy, language and other skills.

There are three ways to address these barriers: by motivating change, strengthening human and organizational capacity, and developing enabling tools and systems. After mapping the needs against our chosen approaches, we arrived at three opportunity areas which have meaningful overlap with our current portfolio and offer a logical future focus.

Opportunity areas in child education

Motivating early education – Parents, educators, and communities can be encouraged to promote early education through financial and non-financial incentives.

Children fit for school – Teachers, administrators, parents, and communities require strong skills to create and support preschool intervention programs and transition into primary schools.

Schools fit for children – Effective, relevant and affordable tools and systems can help boost quality education for children.

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Conclusion

A brief summary: how we identified opportunity areas

The UBS Optimus Foundation's next five-year strategic planning process is scheduled to begin in the next year. In anticipation, we conducted this philanthropic market analysis to better understand the development landscape in which we work, and refresh our knowledge of the key trends, barriers, and opportunities in each of our granting areas. Mindful of the foundation's size, resources, guiding principles, and capabilities, we also want to be realistic about the high impact goals the foundation can expect to accomplish in the next few years.

Eight criteria – social impact, innovation, evidence, capacity strengthening, “bridge the gap,” “intuitive,” and “Optimus/UBS capabilities” – helped us screen the available options. We mapped possible approaches against needs in each of the three fields, and defined specific opportunity areas within child health, child protection, and child education as summarized on the next page.

Complementarity among UBS Optimus Foundation Granting Areas

Although we conducted separate landscaping exercises for each of our three focus fields, child health, education, and protection are highly inter-related. Children's overall well-being is dependent on the attainment of good health, educational opportunities and protection from violence and abuse. We highlight the following relationships and connections:

Health: When children are sick with any of our five priority health conditions – perinatal conditions, respiratory infections, diarrhea, malnutrition, or worms – their ability to thrive is significantly impacted, and so are their educational opportunities. Because poor health weakens children and limits their mobility and motivation, many sick children do not attend school. Those who do attend are in no position to learn and often suffer academically.

Health conditions that affect very young children – those under five – have significant long-lasting consequences that manifest several years later, when it's time to go to school. For example, undernutrition in children who are under two years of age, causes permanent damage to cognitive ability.

Encouragingly, though, investment in child health interventions – especially if they are conducted in early childhood before children are ready for school – has positive educational effects. Proper diagnosis of childhood fever and deworming both lead to long-term improvement in educational and professional outcomes.

Education: The relationship between health and education also works both ways – education positively impacts health. Enhanced early childhood education, in particular, improves children's health and health behaviors. The reason for this is simple: children learn a number of skills at school, including how to take care of themselves, prevent sickness, and make healthy choices about diet, nutrition, and sanitation practices.



Understanding the basic packages of what it takes for children to “survive and thrive” in their local settings is one of the best investments that can be made. This is being done by the Mother and Infant Research Activities organization in their work with Nepalese communities.

Opportunity areas in child health

First minutes of life – Addressing the needs of vulnerable children during this critical period surrounding birth with the adaptation and delivery of solutions to children (delivery innovation) as well as tailored solutions to fit local socioeconomic contexts.

Child-friendly care – Providing appropriate nutrition and care to prevent and treat infections – including redesigning or re-formulating health solutions to make them age-appropriate, and delivery innovation to ensure that health services and products reach children in resource-poor settings.

Tailored for kids and communities – Involving local communities and experts to address the multi-dimensional determinants of health to support the development of effective, sustainable and locally appropriate solutions that meet the health needs of vulnerable children.

Opportunity areas in child protection

Strengthen capacity – Develop the skills of funders and implementers through training. Harness and enhance local knowledge and capacity.

Build a culture of evidence – Develop assessment tools, methods and best practices for the field. Leverage existing research, integrate a research component into implementation projects, involve community leaders and make evidence-informed decision making the norm for this sector.

Communicate what works – Develop, codify and disseminate knowledge to all stakeholders in order to advance the state of this sector, improve policy and practice, promote more funding and provide greater legal protections for children.

Opportunity areas for child education

Motivating early education – Parents, educators, and communities are encouraged to promote early education through financial and non-financial incentives.

Children fit for school – Teachers, administrators, parents, and communities are provided training and assistance to build the strong skills necessary to create and support preschool intervention programs and children's transition into primary schools.

Schools fit for children – Effective, relevant and affordable tools and systems are developed and strengthened to help boost quality education for children.

Children who are surrounded by educated care-takers also tend to be healthier; educated mothers who can understand medical advice, and literate communities are key determinants of health, particularly among the most vulnerable children.

Finally, educational settings can serve as important locations for health interventions. Trained medical professionals and community-based workers can administer a variety of services – vaccines, check-ups, and even behavior change classes – in the school setting.

At the same time, however, it is important to note that a negative relationship can exist between education and child protection. Schools may not be safe, and children can be abused by peers, other students, or educators.

Child Protection: Child protection has an effect on both child health and child education. When children are subjected to abuse and violence, there are tremendous negative consequences. The psychosocial conditions associated with abuse – particularly, persistent fear and abuse – negatively impact a child's learning and healthy development.

Abused and neglected children have lower standardized test scores and school marks, even when socioeconomic status and other demographic factors are considered.

Child abuse and neglect are also correlated with increased public health concerns, including community and domestic violence, delinquency, mental health disorders, alcohol and illicit substance abuse, obesity, suicide, and teen pregnancy.

Shared opportunities in early childhood care and development are a priority

In each of the three landscapes, we determined what age range we should focus on, what priority needs to address, and the best approach for delivering solutions. This process illuminated common opportunities across the areas of health, protection and education that will help us leverage our impact across the foundation.

Who: We place special emphasis on children age 0–5 given the high impact potential during the early childhood years. In Health, the focus is on surviving childbirth, appropriate nutrition and preventing infections. In Protection, the focus is on special research into preventive services that will benefit younger children. In Education, the focus is on child readiness, teacher quality, and enabling systems. Further, the focus is on maternal interventions which benefit children during the early childhood period, and strengthening capacities among parents and grandparents to engage constructively with younger children.

Where: We identified school as the ideal location to administer child health and protection interventions, as well as education interventions that go beyond traditional academics. School-based interventions are well-suited for delivering nutrition, hygiene, health literacy, and immunization programs as part of broader health initiatives. Schools have a captive audience and are an excellent venue to reach a large number of children with

information and programs focused on how to stay safe from sexual violence and abuse, and how to get help if needed. Beyond academics, schools can provide children with social and life skills and encourage leadership. In addition, schools can serve as community anchors, bringing not just parents but other community members together for their own education, health and anti-violence programs, and through informal activities which strengthen community relationships.

How: Capacity strengthening – consisting of both skills building and technical assistance – is fundamental to achieving goals in the area of early childhood care and development. Formal support – to build technical knowledge, share best practices and ingrain policies and procedures – is required for teachers, health practitioners, police and others addressing issues of child sexual violence and abuse, school systems, health systems, policing and judicial systems. Informal support – to build understanding and softer skills for parents and caregivers so they can help develop readiness in pre-school age children – can be achieved through community groups and training provided through community outreach workers.

More than two decades ago, the venerable Indian scientist V. Ramalingaswami said, “It’s not about more money for health, but more health for the money.” As an independent foundation seeking to improve child health, safety and education, knowing that our capacity to do so depends on generous donations from the clients of a large global bank, we ponder his words. In our view, we have a great responsibility to children, yet nearly as great a responsibility to our “shareholders” – those generous clients – to ensure that our philanthropic investments are among the most effective in the world.

This document reflects our commitment to both.

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