

DRAFT FOR DISCUSSION  
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# Child Health and the Missing Link:

## Working with the Private Sector for Better Results

*April Harding*  
World Bank

*Henrik Axelson*  
The Partnership for Maternal, Newborn & Child Health

*Flavia Bustreo*  
The Partnership for Maternal, Newborn & Child Health



## Preface

This document is a draft for discussion. It will become a chapter in a book that examines the role of the private sector in the delivery of health services and products in low- and middle-income countries. The book will be published in 2011 by the Center for Global Development, and will include chapters on child health, family planning, tuberculosis, malaria, and HIV/AIDS. The target audience of the book is bilateral and multilateral donors. It is hoped that an increased understanding of the scale and scope of the private sector and its potential to contribute to improved health outcomes will inform donors' funding and programming priorities as they work with national policy makers and other partners to design, implement and monitor programs in the health sector.

Our research found that the private sector is a considerable source of care for children in low- and middle-income countries, including for the poor, and that the private sector is very diverse, including actors such as hospitals, clinics, individual doctors, pharmacies, drug vendors, traditional practitioners, NGOs, and producers and distributors of commodities. Unfortunately, child health programs have for the most part not addressed this reality, at least not in a systematic and sustainable manner. As a result, the potential of the private sector to contribute to improved child health outcomes remains untapped and the opportunity to work with the private sector to ensure that it provides effective and responsible health care for children has not been fully realized. Ultimately, this means that programs have not maximized their potential impact on children's health and well-being.

We suggest that the reasons why the private sector has not been engaged in child health programs are systemic; most programs rely on a public sector model that focuses on inputs and outputs, rather than outcomes. Nevertheless, in some areas and countries the private sector has been engaged to deliver child health services and products. We highlight a range of strategies that are emerging as powerful instruments to expand access (e.g. contracting) and improve quality (e.g. accreditation, and training combined with other supports and incentives). To date, however, few strategies except for contracting have been scaled up to a national or regional level, and sustainability, especially with regard to government commitment remains unclear. We suggest that promising strategies should be taken to scale and that they should be complemented by investments in the health system and in governments' stewardship functions. Monitoring and evaluation should be an integral component of any efforts to engage the private sector.

We hope that this paper will stimulate discussion about how donors and their development partners can apply funding and policy mechanisms to tap the potential of the private sector to contribute to improved child health outcomes through the delivery of services and products. Your comments and suggestions to Henrik Axelson, The Partnership for Maternal, Newborn & Child Health (axelsonh@who.int), would help us to strengthen the evidence and arguments contained in this document.

**April Harding**

Health, Nutrition and Population Hub and Investment Climate Department - World Bank

### **The 'cheap drug for the poor'**

*Sometimes the person giving medical advice is just as important as the advice they give.*

*My name is Dr Flavia Bustreo. In 1997 I was working as a medical officer for the child health program in Massalamia, a rural district of Sudan. In front of me stood a proud Sudanese grandmother, holding her baby granddaughter in her arms. The baby was drowsy, listless and dehydrated, suffering the effects of diarrhea. If not cared for properly, this child would probably die. She had been seen in the dispensary by a health worker, recently trained through our program in the proper treatment of diarrhea. The worker had done everything right, reached the right conclusion, and correctly advised the grandmother to continue feeding the child and to give oral rehydration salts.*

*I was curious to understand how this advice had been received, so I asked the grandmother about the consultation and whether she would be able to provide the care the baby needed. Her answer stunned me. She clearly recognized me as a foreign doctor in this land of desolation and said: "The health worker explained this salt treatment for my grandchild, but it is a 'cheap drug for the poor', so I will not give it to her. I will take her to the village doctor [her word for the informal provider] who knows what she needs." I reflected that training this informal provider might have accomplished more to save this child, because he had the trust of the grandmother.*

## The elephant in the room?

*Throughout the developing world, private practitioners treat sick children, while private pharmacies and drug sellers provide them with medicines. Private retailers sell bednets, providing protection from malaria. In some countries, food companies fortify their foods to combat the nutritional deficiencies that blight child health and development. Unfortunately, child health programs do not deal with this reality: neither the potential of tapping into private sector capacity, nor the opportunity to ensure – through different policy strategies – that the private sector provides effective and responsible health care for children. And there is no doubt that this omission has contributed to the disappointing results of donor-supported child health initiatives.*

*So what's going on? If ignoring the private sector undermines program impact, why aren't private actors welcomed with open arms? The reasons relate to how health programs are designed and implemented. Programs usually follow a design 'template' that relates exclusively to the public sector, while performance monitoring focuses on the number of staff trained or products distributed. These practices overlook the role of the private sector in child health, while hindering scrutiny of program approaches that aren't achieving meaningful improvements in coverage and quality.*

*The solution seems clear, if maddeningly elusive. Donors who want to support low- and middle-income country governments in their efforts to improve child health must alter these common templates for program design and monitoring. This must happen if their efforts are to achieve improvements in the health of children. In many instances, a tighter performance focus will reveal the need to work with the private sector to achieve program goals, and to mobilize private resources towards improving the health of children. Several strategies are emerging as powerful instruments to expand access (e.g. contracting, partnerships for food fortification) and to improve the quality of services and products that are critical for child health (e.g. accreditation and training). To ensure sustainability of strategies and outcomes, engagement with the private sector needs to be complemented by investments in strengthening the stewardship capacity of ministries and public officials in developing countries.*



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## 1. Introduction: child health and the role of the private sector

Every day, more than 24,000 children die from illnesses that can be easily prevented or cheaply cured (UNICEF, 2009). Why is this tragedy happening? It can't be blamed on a lack of medical knowledge, because most child deaths can be avoided by just 24 simple and cost-effective interventions (Bryce et al, 2008). Nor is it simply a lack of resources, since many of the interventions are inexpensive, and a number of poor countries have improved child health by getting them to children. Yet, many countries are making little headway in improving the health of their children.

Donors have long focused attention on improving the health of children in poor countries, and there have been some notable successes. For example, the establishment of the GAVI Alliance has increased access to immunization in poor countries, leading to sustained reductions in some vaccine-preventable diseases, such as measles and polio. Nevertheless, donor-supported programs in many countries have little impact on the biggest killers of children: diarrhea, pneumonia and malaria. Here the problem lies not in a lack of interventions (or technologies), but rather in the inability of programs to ensure that the children who need them most, namely the poor and marginalized, can access them. In many countries, donors have found it challenging to turn their support into successes – especially when working to extend outreach or community services to poor households and to improve overall service quality and access.

This paper looks at the experience of programs related to child health, and tries to understand why problems occur. In particular, it aims to understand why these programs tend to be implemented without engaging the private sector, and what impact this has. Our earlier research indicated that this tendency is undermining program impact in many countries, and our analysis yielded some suggestions about program design and policy changes at country level (Bustreo et al, 2003). However, in this paper we will move on from our earlier work to examine how donor programs are put together and implemented – and how these processes are linked to the performance problems we observe. From this analysis, we will suggest changes donors can make in their development assistance for child health. We will indicate where these changes are needed to improve program impact – especially where the context makes it likely that the private health sector will need to be brought into programs to help them achieve their goals.

Household surveys reveal that sick children in many developing countries are frequently taken to private providers, which range from clinics and doctors to drug sellers and traditional healers. The quality of care received is varied in many instances, and especially among the providers used heavily by poor people (e.g. informal providers, providers with less training, and, with fewer linkages to other sources of care). Yet, choosing these providers persists even when measurable improvements are made in public services.<sup>1</sup> Therefore, to improve the care of these children, it is necessary to improve the quality of private care on offer by engaging directly with private providers, and to link these providers more closely with the public health system. While few child health programs have engaged private health actors, other related programs have (e.g. tuberculosis and malaria). This paper will examine when child health programs have engaged directly with the private sector. It will shed light on where private actors have most to contribute to the health of children, and why this often doesn't happen. It will also suggest actions that program funders can take to involve the private sector systematically in reaching more sick children with life-saving interventions.

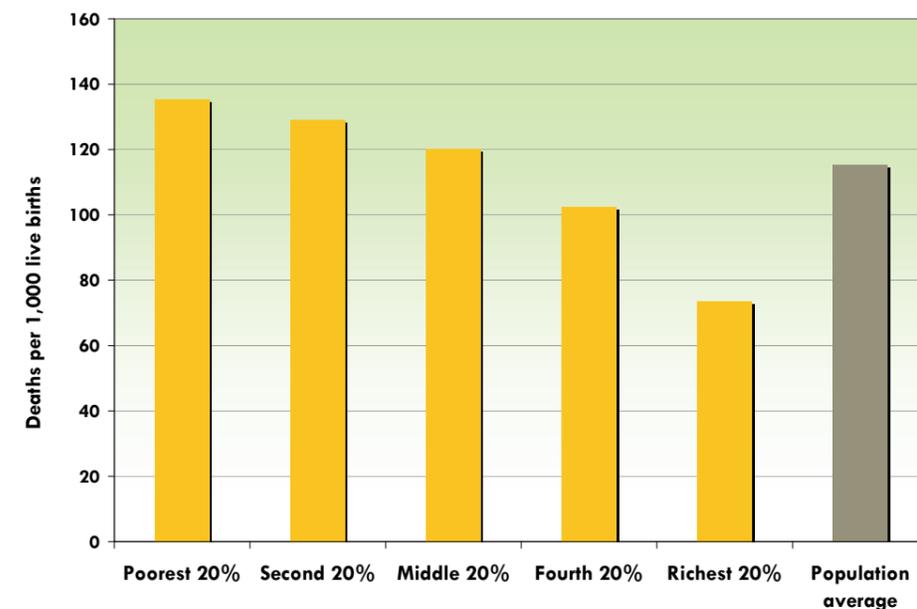
<sup>1</sup> The highest documented proportion of population switching to improved services is in Bangladesh, where it was a response to a fully implemented IMCI initiative (see Arifeen et al, 2009).

## 2. Making the case: why engage the private sector in child health programs?

### 2.1 The nature of problems in child health and what is necessary to address them

In developing countries, children die of health problems that are extremely rare in most countries of the developed world. Among children under five, the most common causes of death are diarrhea, malaria and pneumonia (Black et al, 2010).<sup>2</sup> Newborn babies most commonly die of complications resulting from premature birth, low birth weight, birth asphyxia and severe infections called sepsis. Most cases of diarrhea are contracted by drinking contaminated water and most cases of pneumonia result from viral or bacterial transmission in overcrowded living areas. Their severity and fatality is frequently exacerbated by underlying problems of malnutrition. In many countries, these health problems fall even more on poor people than on those with more resources. Globally, among the poorest 20%, on average 135 of every 1,000 children die before their fifth birthday, which is almost double the number among the richest 20% (Figure 1).

**Figure 1: Poor children die more often: Under-five mortality rates by socio-economic wealth quintiles**



Source: Gwatkin et al, 2007

Most of these child deaths result from the lack of basic services, knowledge and nutrition that people in developed countries take for granted. These include robust and well-funded health systems, effective health-promotion and the plentiful supply of nutritious food. These things are largely absent from the poorest countries, where weak health systems lead to much worse health outcomes for children, who often receive poor-quality curative treatment. In the home, lack of knowledge or mistaken knowledge contributes much to child illness, when caregivers do the wrong things or don't take children for treatment when needed.

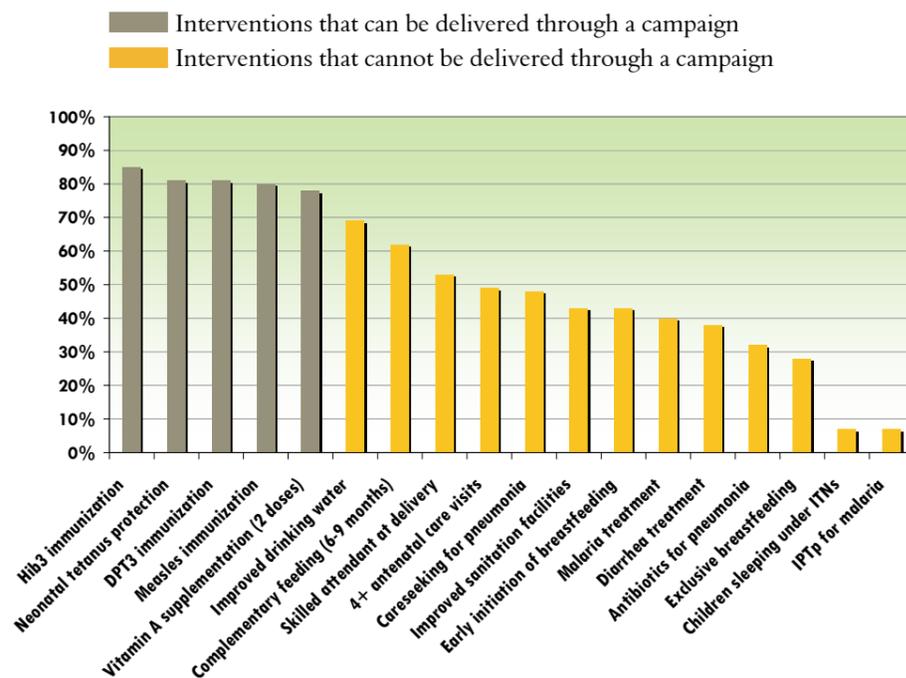
<sup>2</sup> Children's deaths are linked to many factors beyond the health system (which is the focus of our discussion), including the country's and the household's economic strength, mothers' education, and the availability and quality of transport infrastructure and water and sanitation.

However, the problems lie deeper than direct prevention and cure of illness. Nutrition problems, stemming from inadequate food and feeding practices, contribute to children's deaths in developing countries. Micronutrient deficiencies contribute to other health problems, as well as undermining cognitive development and productive capacity later in life (Victora et al, 2008; Walker et al, 2007). Despite much progress on enhancing coverage and sustainability of immunization levels, many countries still have low coverage.

*The challenge for donor-supported programs.* Ideally, health systems in poor countries would be quickly strengthened across these areas: quality of frontline health care, coverage of community outreach services, and food fortification. However, we do not live in an ideal world. These problems relate to basic service delivery (adequate curative and preventive services by providers, and adequate outreach services to households). They can only be remedied through substantial systemic changes in frontline health care services, both in terms of coverage and quality. Such changes have proven challenging for outsiders (e.g. donors) to support and implement.

Externally supported mass 'campaigns' often deliver results, as shown by the coverage rates achieved for schedulable immunizations and vitamin A supplements. Figure 2 shows median coverage rates now exceed 70% across 68 countries that account for more than 95% of global maternal and child mortality. However, despite concerted efforts to expand coverage for other interventions, rates are much lower. In many countries, rates are stagnant, despite donor efforts. For example, coverage of treatment for diarrhea and acute respiratory infection (ARI), two of the leading killers of children under five, is 38% and 32% respectively. Limited data on coverage of neonatal interventions also indicates very low coverage. As with malaria, we have identified the interventions, but donors have found it extremely hard to get them *delivered*. In short, many developing country health systems, even with considerable donor support, have proven unable to improve coverage of these interventions (Boerma et al, 2008).

**Figure 2: Success via campaigns, but not for other delivery platforms: Median coverage of key interventions in 68 countries**



Source: Bryce et al, 2008

A few important child health illnesses can be prevented by mass immunizations that don't need to be scheduled to target children of a specific age. As a result, these interventions, such as vitamin A supplementation, are relatively amenable to narrow or vertical program approaches. They can be implemented without resolving the underlying service delivery problems, and this allows them to be delivered through periodic externally-supported campaigns (see last column of Table 1). These are simpler for outsiders to support, although they are not sustainable unless this support is ongoing.

Periodic campaigns is one platform donors can predictably use to deliver interventions, but it only works for a limited set of interventions which can be delivered at a pre-specified time, once or twice a year. This delivery modality also requires other conditions to work. First, the recipients are easily identifiable (e.g. they don't need to be sick). Second, delivery doesn't need to be linked to routine services to be effective. Third, delivery can be standardized (e.g. the same for every person, or red bednet for children, blue bednet for mothers). Fourth, delivery doesn't require the deliverer to exercise discretion. Finally, the intervention can be delivered by one entity with broad responsibilities across a wide area (e.g. network externalities). Recent evidence indicates that it may be feasible to use campaigns to increase household ownership of bednets quickly, although it is not yet clear whether this leads to equivalent increases in their use and in prevention of malaria (Pritchett and Woolcock, 2008).

The other priority child health interventions depend on the availability and quality of routinely available services, delivered both in clinics and by outreach services to communities. Many, such as malaria treatment, rely on routine services that work and are accessible when children are ill. Some, such as promotion of breastfeeding, require outreach services – that is, a health worker must go into communities and households to promote healthy caregiving behaviors. Food fortification requires an on-going collaboration between health authorities and food production companies.

Table 1 presents the priority child health interventions and distinguishes them by type (e.g. curative, preventive, promotive) and the mode or platform of service delivery most often used to get them delivered in developing countries.<sup>3</sup>

**Table 1: Priority child health interventions by delivery platform and type**

Delivery platform	Routine services	Outreach services	Government/business collaboration	Campaigns
Type of intervention	<u>Curative</u> Malaria treatment Acute respiratory infection (ARI) treatment Diarrhea treatment Treatment of neonatal sepsis, asphyxia and prematurity	<u>Promotive</u> Oral rehydration and continued feeding Exclusive breastfeeding (<6 months) Breastfeeding and complementary food (6-9 months) Bednets	<u>Preventive</u> Food fortification Pasteurization of milk Guarding safety of food, drugs, consumer products Environmental sanitation Clean water	<u>Preventive/schedulable</u> Measles, DPT3, Hib3 immunizations Vitamin A supplement Bednets
	<u>Preventive</u> Antenatal care Routine immunizations Neonatal tetanus protection Postnatal care Prevention of mother-to-child HIV transmission			

<sup>3</sup> Adequate bednet and immunization coverage cannot be achieved solely by campaigns, so bednets and immunizations are listed under both routine services and campaigns. This takes into account the other activities outside of campaigns that must be undertaken to achieve coverage.

In the next section we will look at typical child health programs, and where they have encountered barriers – focusing on those interventions and delivery modes that have presented programs with the biggest problems. For interventions that are not amenable to delivery via campaigns, we will aim to shed light on the nature of the problems confronted by donors to achieve increased coverage.

We will see that expansion of coverage often stalls at low levels because donor-supported programs are unable to get routine services working. Likewise, they have consistently had problems getting community outreach services working. The child health programs examined also did not include food fortification initiatives – instead focusing more narrowly on curative and preventive health services. And many of these weaknesses were grounded in, or at least linked to, failure to appreciate the existence, potential and weaknesses of the private sector.

## 2.2 How child health assistance and programs work – the example of IMCI

The focus on increasing coverage is not new. Child health programs have long been trying to improve coverage of the interventions referred to above, commonly using the Integrated Management of Childhood Illness (IMCI) program design to pursue improvements in child health in developing countries (Tulloch, 1999). Not all child health initiatives use IMCI as the main modality for improving health, but it is the most widely used and evaluated.<sup>4, 5</sup> Hence, we have used it as an example of how child health assistance and programs work.

IMCI is based on the concept that treatment of the common childhood illnesses should be provided in an integrated and holistic manner, maximizing the health benefits of each contact sick children have with public health facilities. IMCI was introduced between 1996 and 2001 in most countries with moderate to high levels of child mortality. The program targets three areas: the quality of clinical care, functionality of basic facilities and effectiveness of outreach activities. Efforts to improve clinical quality typically involve training staff in how to treat the most common childhood illnesses. Public facility improvements, in particular staff supervision and drug availability, are also targeted. Outreach activities of some sort are usually included to educate caregivers in the community about good health practices in the home.<sup>6</sup>

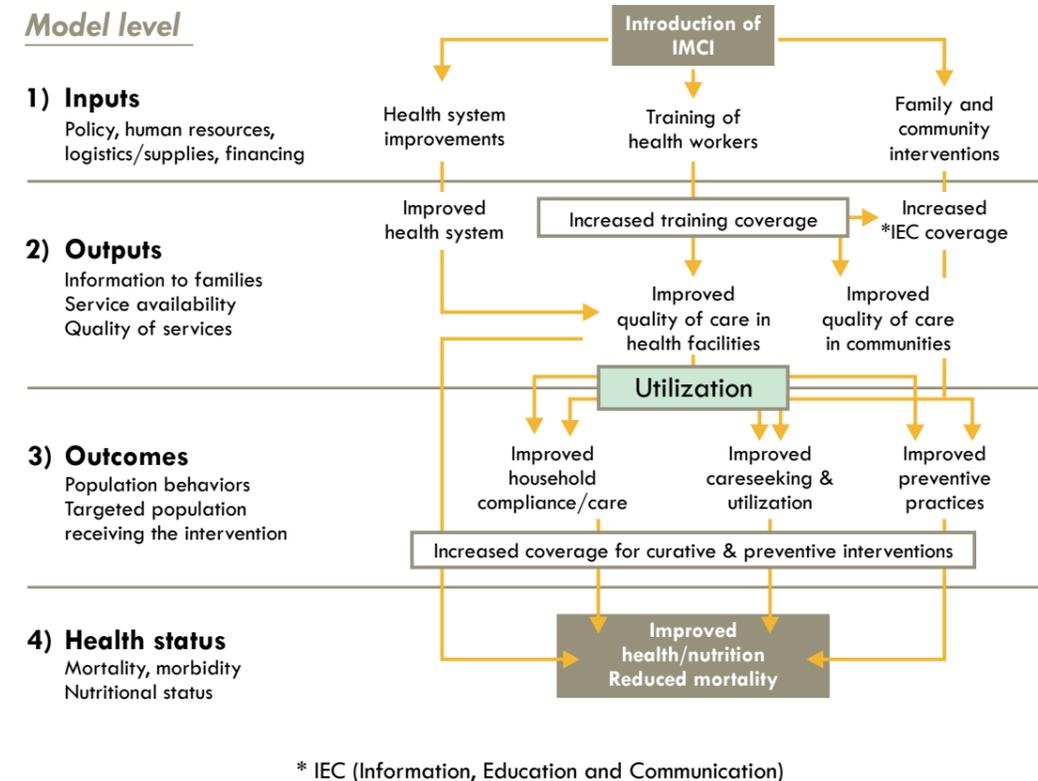
IMCI implementation in a country starts with the adaptation of standard treatment guidelines to the country setting (taking into account the patterns of common illnesses and of antibiotic resistance). The guidelines are then translated into a standard training program for health workers. The IMCI model assumes that the training of health workers will improve the quality of care in health facilities, which in turn will increase utilization of health facilities, and improve health and nutrition outcomes (see Figure 3).

<sup>4</sup> Many programs, especially those funded by USAID, include activities at the community level to improve the health of children. However, we were not able to analyze these activities because they have never been clearly characterized (what are the key elements, how are they intended to be implemented, what really got implemented) and never evaluated. In contrast, the IMCI approach has been extensively assessed through a multi-country evaluation.

<sup>5</sup> IMCI Multi-country evaluation (MCE), see <http://www.who.int/imci-mce/>

<sup>6</sup> The public facility improvement and the community outreach activities frequently are not fully implemented, so in practice most programs focus on quality improvements and training.

Figure 3: The IMCI impact model



Source: Arifeen et al, 2009 (adapted from Bryce et al, 2005)

However, from the outset problems emerged in implementation of the IMCI strategy. No clear strategy for the strengthening of the public health system emerged, so common systemic failings such as weak supervision of staff and shortage of drugs persisted in most countries. Likewise, problems occurred with the range of strategies applied to expand family and community interventions, which are critical to increasing caregiver knowledge about breastfeeding, the use of oral rehydration salts (ORS) and bednets. As a result, implementation was inconsistent and outreach services often deteriorated quickly. Four of the five countries where the IMCI program has been rigorously evaluated had difficulty increasing population coverage with outreach services related to careseeking, nutrition and correct care of sick children at home.<sup>7</sup> As a result, while treatment quality in frontline public clinics has improved in some countries (Bryce et al, 2005; Victora et al, 2006), measurable improvements in child health attributable to IMCI have only been found in Tanzania (Schellenberg et al, 2004). The degree to which health system limitations reduce the effective implementation of IMCI was not appreciated when the program began.

Equally critically, the program has generally not explored the role and potential contribution of the private sector, because the IMCI approach has really only included activities to improve services provided in public clinics, often managed in a vertical and centralized approach.<sup>8</sup> Program designers apparently believed that if they could improve clinical service quality, then the large number of people who were going elsewhere (or not seeking care) would quickly switch to them. But much evidence shows us that people continue to go to providers in the community that they trust and find convenient – and these providers are very often private.

<sup>7</sup> IMCI Multi-country evaluation (MCE), see <http://www.who.int/imci-mce/>

<sup>8</sup> With the exception of sporadically involving some private providers in the IMCI training.

The focus on improving health services solely through the public provider network wasn't successful. However, just as significantly, programs also omitted opportunities to improve child health outside the health system. They didn't, for example, include activities to establish food fortification programs. These have proven both successful and cost-effective in improving child health and development, and amenable to donor support. Again, a failure to see opportunities to harness the private sector to child health program goals appears to have limited the impact of the programs.

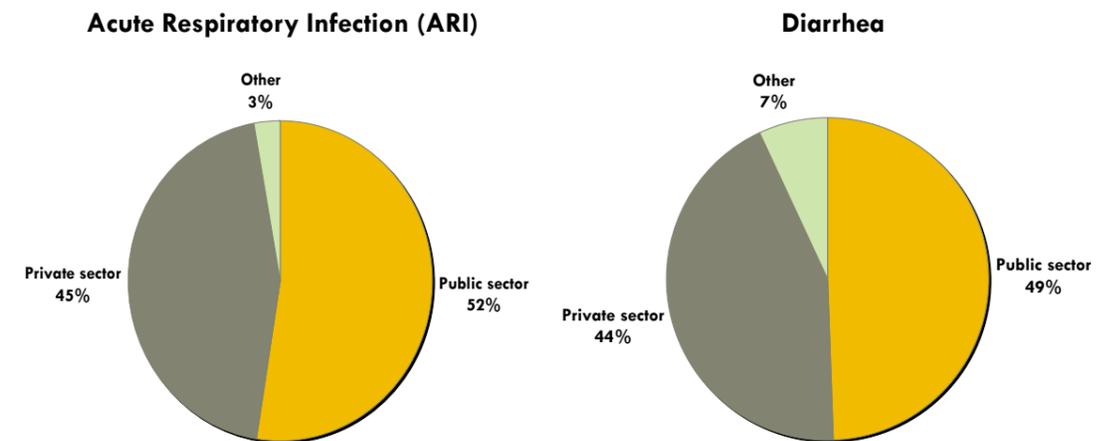
### 2.3 Why is the private sector contribution important to improve child health?

While policy discussions and program designs rarely reflect it, the private sector plays a substantial role in delivering healthcare and products to children, and this means that it already influences children's health. When thinking about how to engage constructively this private sector, there are two distinct underlying phenomena to keep in mind. First, there is extensive use of poor quality providers, which undermines children's health. Improving the quality of this care can be critical for improving outcomes. Second, where coverage gaps for priority child health interventions persist, the capacity of good quality providers can be mobilized to increase access and coverage.

Research has shown that in many developing countries the private sector provides, on average, between one-third and two-thirds of the treatment for diarrhea and acute respiratory infection (ARI) in children under five (see DHS analysis below). Over the past few years, the importance of private practitioners (Tawfik et al, 2002), drug sellers (Brieger et al, 2005; Goodman et al, 2007), bednet distributors and retailers (Webster et al, 2007), and food producers (Darnton-Hill and Nalubola, 2002) has become more visible. Also, while private actors don't undertake outreach services spontaneously (due to lack of demand from households), when contracted they have been successfully deployed to expand outreach services. Of course, the actors and the roles they play, and the associated issues and their magnitude vary greatly across countries and within countries. The significance of the private sector's contribution will also vary greatly according to the illness being tackled.

Demographic and Health Surveys (DHS), which are conducted regularly in many low- and middle-income countries, collect data on source of treatment of common childhood illnesses. We used data from DHS from 51 countries to study sources of treatment of ARI and diarrhea (see Annex 1 for a list of countries and survey years). The surveys show that, on average, the private sector provided treatment to 45% of children under five with ARI symptoms and to 44% of those with diarrhea (Figure 4). The average numbers mask significant differences between countries. For example, in Bangladesh, 81% of ARI cases and 83% of diarrhea cases seen by a provider were treated in the private sector. By contrast, in Bolivia the corresponding figures were 31% and 25%.

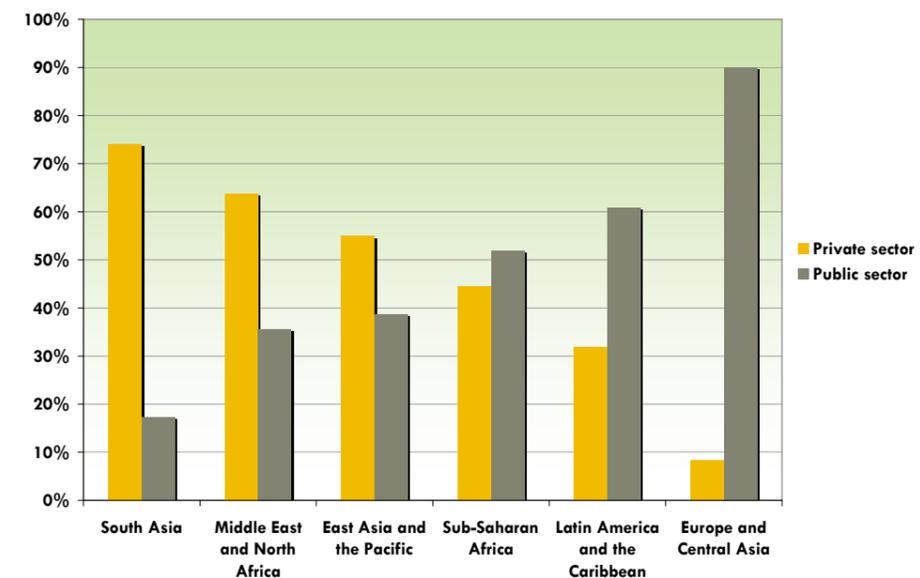
Figure 4: Where do they go? First source of treatment of ARI and diarrhea in children under five, by type of provider<sup>9</sup>



Source: Demographic and Health Surveys

There are clear differences between regions in the significance of private providers as the source of treatment of ARI symptoms and diarrhea (Figure 5). In South Asia, East Asia and the Pacific, and the Middle East and North Africa, a significant majority of cases were treated in the private sector. By contrast, the overwhelming majority (about 90%) of cases in Europe and Central Asia were treated in the public sector. About 60% of cases in Latin America and the Caribbean were also treated by the public sector. In Sub-Saharan Africa, the public sector treated a somewhat larger proportion (about 50% vs. 45%) than the private sector.

Figure 5: Treatment of ARI and diarrhea in children under five, by type of provider and region

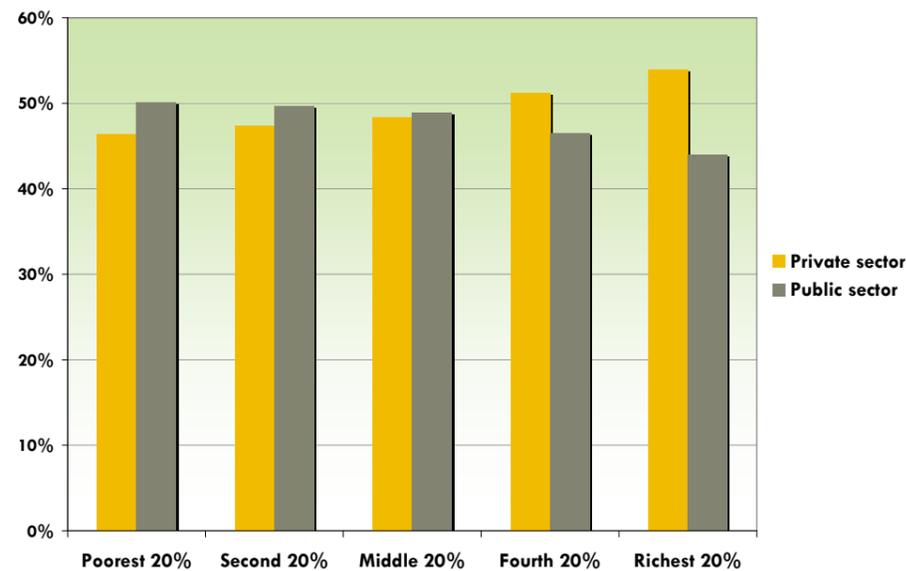


Source: Demographic and Health Surveys

<sup>9</sup> The private sector includes hospitals, clinics, individual doctors, pharmacies, drug vendors, traditional practitioners, and NGOs.

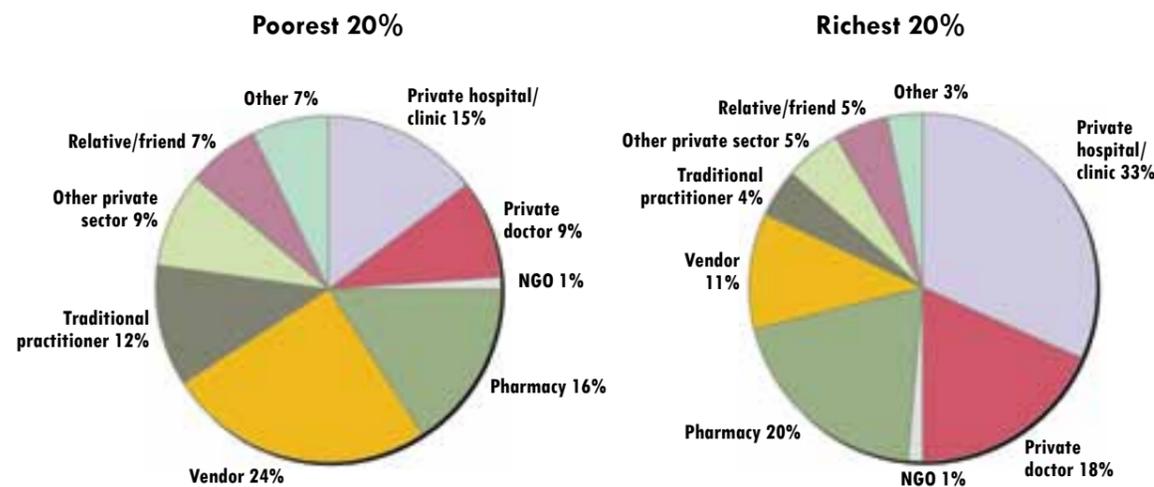
And it's not only the rich in developing countries who are treated by the private sector. The surveys show that the private sector also constitutes a significant source of treatment for poor people (Figure 6). However, there is a difference in the types of private sector providers used by the poor and the rich. The poor used informal providers and retail outlets more than the rich, who used formal providers to a greater extent (Figure 7). For example, as a proportion of all private providers, the richest 20% visited a private hospital or clinic or a private doctor for 51% of their ARI and diarrhea treatment, while the corresponding figure for the poorest was only 24%. The poorest also used traditional practitioners (12%) and vendors (24%) more often than the richest (4% and 11% respectively).

**Figure 6: The private sector treats both poor and rich children: treatment of ARI and diarrhea in children under five, by type of provider and socioeconomic status**



Source: Demographic and Health Surveys

**Figure 7: Across the spectrum: types of private sector providers used by the poor and the rich for treatment of ARI and diarrhea in children under five**



Source: Demographic and Health Surveys

Quality of care differs between different kinds of providers. In the formal part of the private sector, which includes private hospitals and clinics, the quality of care is often indistinguishable from that provided in the public sector (Das et al, 2008). However, in countries with the weakest health systems, the private sector includes substantial numbers of unqualified or less-than-fully-qualified providers – and the care provided is often dangerously bad (Bennett et al, 2005). Unfortunately, the poorest people often rely heavily on these providers.

Private pharmacies and drug sellers play a significant role in the health systems of many developing countries. These private sector outlets provide much-needed access to medicines for many illnesses. For example, in Africa private drug sellers are utilized extensively for fever and malaria treatment. It has been estimated that 89% of anti-malarial treatments were provided by the private sector in 2006, mainly by small and often informal drug sellers (Dalberg Global Development Advisors, 2007). However, there are many problems with these activities, particularly related to the uneven quality of drugs, services and advice, and especially for illnesses such as fever and malaria, which people are inclined to self-diagnose and self-treat. Engagement with private actors is warranted not only because the sector has substantial size, scope and reach, but also because it will provide opportunities to influence private actors and steer them towards providing better quality of care to children.

The role of the private sector extends beyond simply providing health services and drugs. Food producers in a number of countries participate in fortification initiatives, which help provide poor people with vital micronutrients (Horton, 2006). Producers of non-food products, such as ORS, have collaborated to ensure that more people have access to, and use, these important products. Similarly, the activities of bednet manufacturers, importers, distributors and retailers directly influence the coverage and utilization of insecticide-treated nets (ITNs). In turn, this directly influences the incidence of malaria – particularly among children, who bear most of the burden of malaria illness and death in poor countries. Analysis of African household survey data in 2005 revealed that the majority of ITNs in use were obtained from private retailers (Webster et al, 2007). Soap for handwashing is also delivered mainly through private retail outlets.

Despite the size and scope of the private sector and its relevance to child health, private actors have had only limited involvement in public health programs for child health. This represents a missed opportunity. Low- and middle-income countries, with support from their development partners, should tap into the strengths of those private actors (in reaching the poor, for example) that provide effective and good-quality care. When they do not, governments need to take steps – in a responsible and practical manner – that will alter the behavior of private actors so that they provide health care to children that is effective and of good quality. We will next discuss the evidence that greater engagement of the private sector in child health programs could make a significant contribution to improved child health. Following that, we will discuss the reasons why the potential of the private sector to contribute to improved child health in this way has not been realized to date.

### 3. How could the private sector be harnessed towards child health improvement?

We know that the private sector is already doing much to influence child health in developing countries. But is that enough, in itself, to open the flood gates to greater involvement in child health programs? The short answer is no. For that to happen, we need to be certain that greater involvement will contribute to achieving key child health goals – by improving the care children are receiving, and/ or expanding coverage of the interventions we know will save children’s lives.

Evidence already exists for what happens when the private sector becomes more involved in health programs, and this can help us judge when and where greater engagement would be beneficial in child health programs. In this section we discuss strategies that have been used primarily to *expand coverage* using private sector capacity, and in the next section we discuss strategies that have been used to *enhance the quality of services or products* already being delivered.

#### 3.1 Strategies to expand coverage of clinic-based services

Several supply- and demand-side instruments have been used to tap the comparative advantage of the private sector to increase coverage of child health products and services. They include contracting, conditional cash transfers, vouchers, insurance subsidies, social marketing, and food fortification subsidies. We review these instruments below.

##### 3.1.1 Contracting NGOs to deliver health service packages

Contracting with private organizations and individuals to deliver specific services has emerged as one of the most promising ways of enabling more people to access services, even in very challenging settings. This is significant, because a key challenge for child health programs is to ensure that critical services and interventions reach more people.

A recent systematic review of studies in low-income countries identified eight cases that had measured impact in terms of quality and/or output, and used a before and after and/or controlled design (Loevinsohn and Harding, 2005). We’ve applied the same inclusion criteria for studies since that review, and found an additional study. Most of the cases involved contracting of primary health care packages, and a number of them specifically targeted coverage of preventive services (see Table 2).

Table 2: Evidence from contracting service packages

Location & Type of Services	Type of Contract & Intervention	Scale (population coverage)	Contracting Arrangement	Evaluation Methodology	Main Results	Subsequent History
1. <b>Cambodia</b> Rural PHC & district hospital services	Service Delivery Contract (SDC) compared to Management Contract (MC) and Control (CC) i.e. government provision of services	1.5 million	Competitively bid, formal contract, managed by special unit of MOH. Some problems with ensuring good relationship with provincial officials but NGOs were paid on time	Randomized controlled study with 12 districts as experimental units. Household and health facility surveys conducted before and after 2.5 years of implementation	SDC and MC much better than CC. Median double difference on 7 indicators for SDC vs. CC was 21.3%p <sup>a</sup> for MC vs. CC double difference was 9.3%p	Expanded to twice as many districts
2. <b>Bangladesh</b> Urban PHC	SDC with NGOs compared to government provision of services, i.e. Chittagong City Corporation (CCC)	4 million	Competitively bid formal contracts, managed by special unit of Local Government Division. Difficulties encountered with paying contractors on time and monitoring adequately	Controlled before and after study with 15 contracts compared to one large area implemented by CCC. Household & health facility survey by third party	Coverage data not yet published. Double difference for availability of specific services (e.g. immunization, family planning, etc.) was very large, 57 to 92%p	Contracts not yet completed. Planning for expansion of contracts far advanced and funding secured
3. <b>Bolivia</b> Urban PHC	Limited MC in Phase 2. MC with expanded authority in Phase 3. Control area had continued public sector management	250,000	Single source contract with NGO. Contract management by committee including community representatives	Controlled, before and after design, but data from routine reporting system, only few indicators examined	Double difference for deliveries between MC and control was 21%p, 1%p for bed occupancy	Unknown
4. <b>Guatemala</b> Rural PHC in mountainous areas	MC in selected municipalities & SDC in more remote areas, compared to government provision (control)	3.4 million	Competitively bid contracts with NGOs. Difficulties with financial management and supervision of contracts	Controlled design based on household survey conducted by 3 <sup>rd</sup> party 3 years after contracting began	Median difference between MC and control on 5 indicators was 11%p (range 5-16%p)	Started as small pilot but expanded rapidly. Now covers 27% of country
5. <b>Haiti</b> NGOs delivering PHC in rural areas	NGOs with SDCs offered performance bonuses based on agreed targets	534,000	Input type of contract changed to one focused on outputs	Before and after (7 months later) design based on household surveys carried out by 3 <sup>rd</sup> party	Average of follow-up minus baseline ranged from -3%p (antenatal care) to +32%p (immunization coverage)	Expanded to cover 1.5 million people, 19% of Haitian population

Location & Type of Services	Type of Contract & Intervention	Scale (population coverage)	Contracting Arrangement	Evaluation Methodology	Main Results	Subsequent History
6. <b>Pakistan</b> Rural PHC	MC for the 104 basic health units in 1 district	3.3 million	Sole source contract with NGO by local government. Received monthly tranche of funds regularly	Interrupted time series design based on routine recording and reporting system	Nearly a four-fold increase in the number of outpatient visits	Only started in May 2003
7. <b>India</b> Improving quality of care by private practitioners	SDC for NGO working with private providers to improve MCH services	54,000	NGOs applied for grant from USAID and then informally contracted with private providers	Before and after (6 months later) design based on household surveys by community health workers	Rapid improvement in provider skills ranging from 25%p to 57%p compared to baseline	Unknown
8. <b>Nicaragua</b> Rural PHC	Combined with CCT; Performance-based contracting	6,000 households	International competitive bidding to select providers (both private organizations and NGOs); Government provided vaccines	2 evaluations, RCT (phase 1) and quasi-experimental (phase 2)	Phase 1 – contracted areas 16.4% more children <3 receiving preventive care compared to controls. Immunization coverage 9% higher in contracted vs. controls. 5.5% decline in stunting in contract areas	Government did not mainstream despite positive results
9. <b>Afghanistan</b> Primary health care nationwide	Performance based and non-performance based SDC with national and international NGOs	23.9 million (82% of population)	Capitation	Household surveys for coverage, balanced score-card methodology for quality of care <sup>11</sup>	Reduction in the under-five mortality rate (from 257 deaths per 1,000 live births in 2000 to 161 in 2007), improvements on several coverage indicators; quality of care in contracted facilities increased by 32% from 2004 to 2007)	

Source: Loevinsohn and Harding, 2005, updated with Nicaragua evidence (Regalia and Castro, 2009)

<sup>10</sup> See Peters et al, 2007, for a description of the scorecard methodology.

The studies found that contracting did improve coverage, even in poor and remote areas. In the four studies of the review that had evaluated the intervention with controlled before-and-after designs, the median coverage increase in program areas versus control areas ranged from 3.4% to 26%. These four cases analyzed 31 main indicators, and all except one favored contracting. Larger improvements were found in relation to factors that are easier to change, such as immunization, vitamin A and antenatal care. Smaller improvements were found for factors that require more substantial changes in provider behavior and careseeking, such as use of family planning and use of clinics and hospitals. Six of the studies compared the performance of contractors with government provision of the same services. Based on measures of both coverage and quality of care, six studies found that contractors were more effective than the government providers. While equity in coverage of services was only measured in one case (Cambodia), the evaluation found that, when equity targets were included in the contract, contractors were more effective in expanding coverage among low-income people.

There are a number of good examples where the contracting of primary health care (PHC) packages has achieved substantial increases in coverage of services. For example, contracting was introduced in Guatemala as part of a broader health reform that sought to introduce alternative management and organizational arrangements, and make the service delivery system more responsive to clients and payers. NGOs were contracted to deliver a PHC package, giving priority to prevention, maternal and child care and basic curative care for 3.2 million people in mountainous areas. Two types of NGOs were contracted: health provider NGOs for delivery of the services, and administrator NGOs that were responsible for administration and financial management. The provider NGOs received payment depending on the number of beneficiaries in their catchment area. The results of the contracting experience were evaluated in program versus control areas. The evaluation found that contracting led to more coverage per dollar spent, and relatively more delivery of priority relative to other, less important, services (La Forgia, 2005).<sup>11</sup> In 1998, the cost per capita per year was US\$6.25.

Contracting can be particularly effective if funding is linked to performance. In Haiti, the performance of healthcare NGOs was found to be extremely uneven, so performance-based contracting was introduced in 1999 (Eichler et al, 2001). Three NGOs were contracted to deliver a PHC package, including maternal and child health and family planning services, to 534,000 people in rural areas. The largest portion of the payment was still fixed, but a bonus of up to 10% of the fixed portion could be earned if targets were reached. Out of seven performance indicators, three were directly related to child health: use of ORT to treat diarrhea, immunization coverage and average waiting time for attention to a child. A neutral third party was contracted to monitor performance. The most striking result of the contracting approach was the significant improvement in immunization coverage. The proportion of children aged 12-23 months who had received full immunization coverage increased from a baseline of 35-49% to 69-79%. Contracting has also been proven as a feasible and effective mechanism for delivering basic health services, including child health, in conflict and post-conflict situations (Box 1).

<sup>11</sup> The contracted areas faced considerably higher costs due to their remoteness and low population density. Compared to the public clinics, they were given additional resources to cover the extra costs. The evaluation developed a metric to compare efficiency which allocated costs to services, and compared the costs for delivering the same service and achieving the same coverage rates to assess efficiency.

### **Box 1: Contracting with NGOs to increase coverage of basic health services in Afghanistan**

In Afghanistan, the government has contracted NGOs since 2002 to provide a basic package of health services.<sup>12</sup> The contracting in Afghanistan relies on capitation – payments made directly to health care providers for each individual enrolled with that provider, by various national and international NGOs, for a list of services included in the basic package. Evidence suggests that there have been significant improvements in coverage. Population coverage of basic health increased from 9% in 2002 to 82% in 2006. The rate of outpatient visits increased from 0.23 visits in 2003 to 0.94 in 2007 – nearly a 4-fold increase. The contraceptive prevalence rate increased from 5.1% to 13.0%. The percentage of pregnant women receiving at least 1 prenatal visit increased from 8.0% in 2003 to 30% in 2007. Even the percentage of deliveries attended by a physician or midwife, which is an intervention for which coverage is typically slow to change, increased from 9.0% to 18.9% from 2003 to 2006. Increases have also occurred in routine immunization coverage – the percentage of children aged 12 to 23 months who had received 3 doses of DPT vaccine increased from 21.2% in 2003 to 34.6% in 2006 – although the absolute levels remain low by international standards.

Quality of care, as independently assessed by a score card, improved by 32% from 2004 to 2007, which represents an improvement larger than one standard deviation at baseline.<sup>13</sup> There were also sizable reductions in child mortality during this period. The under-five mortality rate decreased from 257 per 1,000 live births in 2000 to 161 in 2007, which is equal to a reduction of 37%. It seems likely to have been generated at least in part by the significant improvements in coverage and quality of services in contracted facilities. The quality of care in public facilities, which also received donor support, actually declined during the same period.

Sources: Loevinsohn and Sayed, 2008; Loevinsohn and Harding, 2005; Sabri et al, 2007; World Bank, 2010

<sup>12</sup> Payment was financed by the World Bank, USAID, and the European Commission.

<sup>13</sup> The score card consists of data on indicators such as staffing; the knowledge of physicians, nurses, and midwives; the quality of observed patient–health worker interactions; and drug availability (Peters et al, 2007).

### **3.2 Strategies to expand coverage of community-based (or outreach) services**

It is one thing to make child health services more available for people seeking services. It is a distinct challenge to improve outreach services which are delivered in the community and people's homes, and which aim to enable and persuade people to take better care of their children's health, and to seek care promptly when necessary. Donor-supported public sector initiatives have often found it particularly difficult to expand coverage of these services, perhaps because it is so difficult to motivate and supervise public workers outside the clinic setting.<sup>14</sup> Private organizations and individuals have been contracted to increase the coverage and effectiveness of these important preventive and promotive services. Contracting with NGOs has been used to increase coverage of nutrition interventions (Marek et al, 1999), immunization and micronutrients (Bhat et al, 2009) and to encourage more poor people to access services. And, individual health workers have been contracted to undertake outreach activities, both generally and for specific behaviors such as promotion of exclusive breastfeeding (Tendler, 1997; Bhandari et al, 2003; Quinn et al, 2005).

<sup>14</sup> Outreach services is a general term referring to all those activities which are primarily delivered outside the clinic setting.

NGOs organizations were successfully contracted to undertake outreach services in Madagascar and Senegal. They were contracted to provide nutrition services to women and their children (Table 3). The projects targeted poor areas and covered more than 450,000 people in each country. NGOs were contracted to provide all aspects of the programs: management, delivery, training, operations research and supervision. The services included monthly growth monitoring of children; weekly nutrition and health education sessions for women; referral to health services for unvaccinated children and pregnant women, for severely malnourished children, and for sick beneficiaries; home visits to follow up on beneficiaries who were referred or who did not come to the services; food supplementation for malnourished children; improved access to water standpipes (in Senegal); and referral to a social fund for income-generating activities (in Madagascar). An evaluation of the projects found that the program increased coverage significantly and that, as a result, severe malnutrition rates decreased by 6% while moderate malnutrition rates decreased by 4% (Marek et al, 1999). Contracting NGOs for nutrition interventions has also been effective in Bangladesh (Table 3).

**Table 3: Evidence on contracting for community nutrition services**

Location & Type of Services	Type of Contract & Intervention	Scale	Contracting Arrangement	Evaluation Methodology	Main Results	Subsequent History
<b>1. Madagascar &amp; Senegal</b> Community nutrition services	Madagascar: SDCs with 50 NGOs Senegal: SDCs with NGOs who worked through small groups of unemployed youth	460,000 in Madagascar 490,000 in Senegal	Madagascar: contract management done by unit in office of the president. In Senegal by para-statal. No serious problems encountered	Before and after (17 months) household survey of nutrition status in Senegal. 3 <sup>rd</sup> party survey of participation in project and control areas	Severe and moderate malnutrition declined 6% and 4% respectively. Participation was 72% in project & 35% in control areas	Continued with NGOs in both countries, albeit in different format
<b>2. Bangladesh</b> Rural community nutrition services	SDC with NGOs compared to control areas with no organized nutrition services (i.e. normal government health services with no nutritional component)	15 million population	Fixed price MOU. Initially sole source selection of NGOs, then competitive. Serious problems with payment & other aspects of contract management	Controlled, before and after study with 6 experimental and 2 control upazillas (sub-districts). Household surveys conducted by 3 <sup>rd</sup> party	Malnutrition rates declined 18% points in SDC sub-districts compared to 13%p in controls (double difference = 5%p. Double difference for Vitamin A was 27%p	Expanded to more than 30 million population

In Ceará (Brazil), contracting outreach workers led to substantial increases in the reach and quality of community-based services, including educating mothers on oral rehydration therapy, vaccination, prenatal care, breastfeeding, and growth monitoring. The overall program led to a tripling of vaccination rates and a one third reduction in the infant death rate (Tendler, 1997).<sup>15</sup> Comparable successes have been achieved by several large-scale programs that engaged private actors to promote appropriate breastfeeding practices (Parlato and Seidel, 1998). These programs have worked through actors such as health providers and village-based workers (Bhandari et al, 2003) and peer counselors (Haider et al, 2000; Morrow et al, 1999).

<sup>15</sup> The program utilized novel mechanisms of community participation in oversight of the contracted workers.

### 3.3 Strategies to promote demand for services

In the examples discussed above, substantial gains in coverage were achieved by contracting private provision of health care or outreach services. However, in some places demand for services is chronically low, so demand constraints are as influential, or more so, than supply constraints. In these settings, actions to increase demand are more needed than actions to expand services.

A range of instruments have been applied to stimulate demand by specific users or groups, including conditional cash transfers, subsidies for health insurance coverage, and vouchers. They share one important advantage over other instruments: they can all be targeted at a group of individuals (unlike many strategies to expand supply). For example, conditional cash transfers and insurance subsidies can be targeted at poor people. Vouchers can be used to get pregnant women to sleep under bednets to protect them from malaria – which is so dangerous during pregnancy.

#### 3.3.1 Targeting subsidies and tapping private providers to overcome access barriers for the poor

Targeting subsidies to the poor is one strategy to increase demand by addressing financial access barriers to care. Examples of such targeted subsidies include conditional cash transfers and health insurance. To be successful these initiatives require an adequate supply of health services. If the public sector is not able to respond to the increased demand, the subsidies can be combined with contracting with private providers.

Conditional cash transfers are essentially welfare programs that pay cash benefits to participating families on condition that they undertake certain actions, such as keeping their children in school, making regular visits to the local health clinic and participating in nutrition programs (Lagarde et al, 2007). Conditional cash transfers have been used where ignorance of the value of, say, prevention services or ‘well-child’ check-ups was leading to low use of services. Conditional cash transfers differ from traditional programs in that they focus on the demand for service provision with the dual objectives of providing short-term income assistance and motivating behaviors that will help poor people in the long term. In India, a conditional cash transfer program called Janani Suraksha Yojana has increased coverage of antenatal care and the proportion of births taking place in health facilities (Lim et al, 2010).

While many conditional cash transfers programs have been implemented in developing countries (Lagarde et al, 2007), particularly in Latin America, few have engaged private actors to deliver services. Conditional cash transfers usually require people to use public clinics. However, where these have been unable to meet the increased demand due to conditional cash transfers, some programs have brought in private providers, as occurred in Nicaragua (Regalia and Castro, 2009). In this case, many more poor people in rural areas began using services as a result of the conditional cash transfer program and the expanded availability of services from contracted private providers (Box 2).

Health insurance is another mechanism that can be used to increase demand for health care by protecting members from the financial consequences of seeking care. To enable population groups of less means, several health insurance programs have subsidized the insurance premiums for the poor and some have enabled reimbursement of care provided by the private sector, such as in Colombia (Box 2).

### **Box 2: Conditional cash transfers and insurance subsidies targeted at the poor increase access to health services**

Two unique initiatives, in Nicaragua and Colombia, illustrate the effectiveness of mechanisms that target subsidies and tap private suppliers to overcome health service access barriers for poor people.

In Nicaragua, the Social Protection Network program combined private sector contracting to expand availability of services with a cash transfer to encourage poor people to use services. Payments were given to households provided they fulfilled certain conditions, including increased school attendance and health service utilization, including antenatal and post-natal care, health check-ups, growth monitoring, nutrition education, and vaccinations.

The program contracted both for-profit and NGO providers through a competitive bidding process managed by the ministries of health and finance. Providers were compensated based on the achievement of service coverage targets. A randomized control evaluation found that the program led to substantial increases in service use. The percentage of children attending preventive health check-up sessions increased in the treatment group from 73.7% to 92.7% between 2000 and 2002, compared with an increase in the control group from 73.6% to 84.1%. Health outcomes were also improved. The number of stunted children in the treatment group decreased by 3.4%, while it increased by 2.2% in the control group.

In 1992, people in Colombia faced serious problems in accessing health care services, particularly in poor and rural areas. To address this, the government established a basic insurance package and funded insurance premiums for poor people (an insurance premium transfer scheme). People could choose their insurers and were reimbursed by them for all services covered by the scheme, whether provided by public or private providers.

As a result of this insurance, more people used health care sought care more promptly when needed. The improvements were particularly notable with regard to important child and maternal health services. Household surveys reveal significant increases in access to those services, particularly in rural areas. According to the DHS (1986, 1990, 1995 and 2000), there was a 66% increase in the number of births attended by a physician, an 18% increase in babies delivered in hospitals or clinics, and a 49% increase in the use of antenatal care by women in rural areas. The 2000 survey found that mortality rates fell sharply among infants whose mothers had access to antenatal care and the option of giving birth in a hospital or clinic, compared with those whose mothers did not.

*Sources: Giedion and Uribe, 2009; Regalía and Castro, 2007*

### **3.3.2 Vouchers to address financial barriers**

Vouchers have been used to stimulate demand when people are not using enough of a product or service because of its cost, rather than because they don't value it. A voucher is a subsidy that flows via an identified user to the provider or retailer of their choice. Vouchers can only be used to cover (part or all of) the price of a designated product or service and are typically limited to use with identified providers (Patouillard et al, 2007). Most programs involve private providers – often with a secondary aim of establishing and sustaining suppliers of services so that availability can be sustained in the future.

Vouchers are often targeted to improve access for an identified group, such as the poorest households or pregnant women. Vouchers have been successfully used to increase coverage of

insecticide-treated nets (ITNs) in Tanzania (Kikumbih et al, 2005), Zambia (Grabowsky et al, 2005) and Ghana (Kweku et al, 2007). Evaluations have found that ITN voucher programs, as part of a multi-strategy bednet program, can be a cost-effective means to increase ITN use. Importantly, ITN vouchers contribute to the expansion and sustainability of routine access to ITNs, which is a critical ingredient for maintaining bednet coverage levels between campaigns (Hanson et al, 2009). They do this by motivating the entry and expansion of private distributors and retailers within the market, which is critical to sustained, on-going access to ITNs.

Voucher schemes have also been used successfully to increase use of sexual and reproductive health services among sex workers and teenagers in Nicaragua (Meuwissen et al, 2006) and to increase attended delivery and reduce maternal mortality among poor women and newborn in the Indian state of Gujarat (Krupp and Madhivanan, 2009). A recent evaluation of the Gujarat voucher scheme found that the percentage of institutional deliveries among poor women increased from 27% to 48% between April 2007 and September 2008 (Mavalankar et al, 2009). Vouchers tend to be used in combination with accreditation (described below). This can motivate retailers or providers to achieve and sustain the required quality standards, because by being accredited they will attract many new customers with vouchers.

## **3.4 Strategies to promote access to products**

### **3.4.1 Upstream product subsidy**

A key public health challenge in some countries is to increase the use of a specific health product or service across the whole population. The prime example is the promotion of artemisinin-combination drugs for malaria treatment. Many malaria-endemic countries need to increase use of these drugs – both to reduce sickness and death for people who contract malaria, and to prevent the development of resistance.

Health programs have been working hard for many years to improve access to effective malaria medicines, but the number of people who have access is actually decreasing (WHO, 2008). At the same time, many people sick with malaria are using ineffective and/or counterfeit drugs, which they often obtain from a large number of private outlets, especially pharmacies and drug sellers. Also worrying is the fact that many obtain artemisinin-monotherapy drugs, which is not recommended by WHO. Although these drugs are effective, they accelerate the resistance of malaria parasites to artemisinin, a process which is slowed when the drug is used in approved combination therapies.

It usually isn't feasible to regulate these drug outlets in the traditional way, because of the large numbers, and because they are often informal, disorganized and widely dispersed. Regulatory crackdowns, by restricting informal drug sellers' access to the most effective malaria drugs, can make it even harder for people to access the right medicine – as drug sellers shift to stocking more ineffective drugs, but people keep using these outlets – as was the case in Tanzania with malaria drugs (Hetzl et al, 2006). Voucher programs to reach the many poor people who need these medicines would be administratively impossible – but they must be reached somehow.

One possible way is to flood the market with artemisinin-combination therapy (ACT), the approved 'frontline protocol' for treating malaria in regions where the disease is endemic. A promising new instrument has been developed to provide a subsidy to purchase all ACTs from the manufacturer. The aim is to increase the flow of ACTs through both public and, critically, informal private distribution channels. This should dramatically increase the distribution and sale of ACTs, while crowding out ineffective and counterfeit drugs and artemisinin-monotherapy drugs. Early evidence from pilot evaluations is promising (Sabot et al, 2009).

### 3.4.2 Social marketing of products

After ARI, diarrhea is the leading killer of children under five. More than 1.5 million children die from the illness each year. Oral rehydration salts (ORS) are a highly cost-effective intervention to reduce the death toll from diarrhea (Jones et al, 2003). Despite this, coverage of diarrhea interventions is low.<sup>16</sup>

It is essential to increase the availability of this vital product in the community close to the homes of poor people, and to ensure they understand how effective it is for dealing with diarrhea. Social marketing is an effective strategy for doing this.<sup>17</sup> It uses marketing techniques to persuade people to change their behavior, and uses private retailers to sell ORS products. By increasing people's understanding of the product and making it available nearby, social marketing has been successful in increasing access to, and utilization of, ORS. Outside child health, it has been successfully applied in a large number of countries to increase coverage of contraceptives and insecticide-treated bednets – also through private networks of retailers.<sup>18</sup>

### 3.4.3 Collaboration with commercial partners for food fortification

Millions of people get sick each year because of micronutrient deficiencies. Many health programs have addressed this through campaign delivery of micronutrient supplements, such as vitamin A and more recently zinc. However, while this approach has managed to increase the uptake of essential micronutrients, food fortification is recognized as a better long-term measure for reducing some micronutrient deficiencies in developing countries, particularly in terms of sustainability (Horton, 2006; Darnton-Hill and Nalubola, 2002).

The cornerstone of any food fortification initiative is the addition of a micronutrient to a widely consumed food, such as salt or bread, during production. Micronutrients that can be used to fortify food include vitamin A, zinc, iron, iodine, folate and calcium. Sufficient fortifier must be added to ensure that consumption of the micronutrient rises to appropriate levels in the population. This means that improved nutrition can be accomplished via an existing food distribution chain. It also requires less change in people's behavior than other interventions, because they do not need to obtain and take a supplement or change their eating habits.

Food fortification is a very cost-effective intervention, at just a few cents per person per year, and reductions in disease and disability can be substantial. Although the exact costs and benefits depend on factors such as the extent and severity of the micronutrient deficiency in a country, and how food is produced and consumed, it typically ranges from US\$22-60 per disability-adjusted life year (DALY) saved, depending on the micronutrient.

Successful food fortification initiatives usually involve government action to engage food producers to add the micronutrient to their product, backed by a public information program to promote demand for fortified foods. Other important elements of a food fortification effort may be:

- funding food producers' investment costs, and/or additional production costs, to prevent

<sup>16</sup> For example, analysis of Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) of 57 countries found that, on average, only 38% of children with diarrhea received ORS and continued to eat; Bryce et al, 2008.

<sup>17</sup> See, for example, Living Goods in Uganda: <http://www.livinggoods.org/>

<sup>18</sup> See family planning chapter of upcoming book for review of evidence on contraceptive products, and malaria chapter for evidence on social marketing efforts for bednets.

retail prices rising too sharply<sup>19</sup>

- reduction in taxes and tariffs to reduce the cost to food producers of buying fortifiers
- creation of regulatory standards for food fortification, backed by monitoring of compliance

Box 3 describes China's successful efforts to reduce goiter due to iodine deficiency by working with the salt industry.

#### **Box 3: Improving child health by reducing iodine deficiency in China**

Iodine is essential for the proper functioning of the thyroid, which regulates metabolism, growth and development. A shortage of iodine leads to an overcompensating thyroid gland and a swollen neck, known as goiter. Iodine is also vital to the development of the brain, and iodine deficiency can reduce intellectual potential by as much as 15%.

In 1995, 20% of children aged eight to ten in China had goiter. 400 million people were estimated to be at risk of iodine deficiency disorders. As a result, the Chinese government launched the National Iodine Deficiency Disorders Elimination Program, which received technical assistance from international organizations through the Iodine Deficiency Disorders Control Project. The donor-funded project focused on developing an initiative to produce and distribute iodized salt throughout the country. Existing salt factories were upgraded to increase production capacity and new iodation centers were established. Other activities included regulation, monitoring, quality control, enforcement and a public information campaign targeting provincial governments and the public.

The initiative cost US\$152 million. To help cover these costs, the government allowed retail salt prices to increase by a small amount, but within limits considered affordable for most families. The World Bank, which financed the project with US\$20 million, deemed the project extremely cost-effective, costing between four and five cents of external funding per beneficiary.

The joint efforts by the government and their development partners rapidly generated significant benefits. By 1999, iodized salt was reaching 94% of the country, compared with 80% in 1995. The quality of iodized salt also improved, with salt samples of high quality increasing from 30% in 1995 to 81% in 1999. This had a positive impact on health outcomes. The goiter rate for children aged eight to ten fell from 20.4% in 1995 to 8.8% in 1999. The success of China's iodation experience has made it a model for other fortification interventions.

Source: Vines, 2007

### 3.5 Strategies to improve quality of care

As discussed above, in many settings, private actors exist with whom governments can collaborate to achieve expansions in access and coverage of products and services. However, addressing quality problems in the private sector may be just as important for achieving child health goals, depending on the country setting. Where large numbers of sick children are taken to private providers with unsafe practices, we need to examine strategies to improve quality. We need to understand when such activities may contribute to the impact of child health programs. This is what we will discuss in this section.

<sup>19</sup> Fortification can be implemented without subsidy, but this may require legislation or strong regulation. It can also be facilitated by government procurement of fortified food, e.g. Bishai and Nalubola, 2002.

### 3.5.1 Improving quality of services through training

Many parents go directly to pharmacies or drug sellers when their children are sick. These are often more accessible than either public clinics or private practitioners, both in terms of location and speed of service. Since access to essential medicines is often limited in public facilities, these outlets play an important role in providing reliable access to medicine. In particular, pharmacies and drug sellers are heavily used in rural areas and by people on lower incomes (Marsh et al, 2004).<sup>20</sup> While the additional access to medicines is beneficial, quality problems abound. Most medicines are sold without prescription, so the drugs received are often inappropriate for the condition. Providers commonly give patients incorrect dosages, and do not tell them how to take the medicine or what possible side effects to be aware of. Historically, health programs have rarely attempted to change how these providers operate, and there is no evidence that regulation on its own works. This section reviews the few evaluated cases where programs have attempted to improve the practice of these providers through training, in an attempt to enhance the quality of a source of medicine and health care that affects many children.

Pharmacy staff often has had more training than drug sellers or vendors in shops or kiosks. In theory, this means they are potentially more likely to benefit from interventions to improve their practice. However, there have been few documented attempts to improve their prescribing or dispensing and only two have been evaluated (Ross-Degnan et al, 1996). As part of national programs to control diarrhea in Kenya and Indonesia, pharmacy owners were trained face-to-face in the proper treatment of the illness in children. This was followed by group sessions to convey the same information to all counter attendants. A before-and-after evaluation was conducted in Kenya, and a randomized control trial in Indonesia, to assess the change in pharmacy practice in both countries. These showed that ORS sales increased by 30% in Kenya and by 21% in Indonesia. The studies do not reveal the longer-term effects or the cost-effectiveness of the training, but they do illustrate that relatively small efforts can improve pharmacy behavior. In this case, the effects are unlikely to be sustained, since the desired change in practice involved reduction in pharmacy income, and the intervention did not include mechanisms to make up for these costs.

In Laos, pharmacy practice was measurably improved by combining a persuasive information campaign (to promote proper preparation and dispensing practices) with stricter enforcement of regulations (Stenson et al, 2001). In Vietnam, a set of interventions was tested to improve pharmacy practice with respect to treatment of ARI and three other conditions (Chuc et al, 2002). As a result, fewer antibiotics were dispensed for mild respiratory infections that did not require them, as pharmacists began asking more and better-informed questions of careseekers who displayed rapid breathing as a symptom.<sup>21</sup>

As we have seen, drug sellers, shops and kiosks often play a large role in access to medicines, and particularly for illnesses that are especially harmful to children, such as malaria. The people involved often have little or no training, their locations are highly dispersed, and they rarely have any connection to the formal health care system. Nevertheless, in the countries and settings where they are numerous, and especially where they provide treatment for priority diseases, it may be important to explore options for improving dispensing.

Training programs have generated improvements in these non-pharmacy retailers (Patouillard et al, 2007). For example, an intervention in Abia State in south-east Nigeria resulted in an

<sup>20</sup> Since purchases from private sources are almost never publicly funded, payment can be a significant burden for low-income people. For the very poor, the payment may deter access to urgently needed medicines.

<sup>21</sup> Evaluation was through random selection and matching pharmacies to be 'treated' vs. function as a control.

increase (from 9% in 2003 to 53% in 2004) in the proportion of drug sellers who recommended a correct drug dose for malaria (Greer et al, 2004). In the Kilifi district of Kenya, the proportion of anti-malarial sales with a correct dosage increased from 32% in 1996 to 83% three months after training, and to 90% six months after training (Marsh et al, 2004).

Program managers in Bungoma (Kenya) sought to devise a less costly and less administratively challenging way to reach drug sellers (compared with previous efforts). This aimed specifically at engaging drug sellers to improve malaria treatment via drug wholesalers with whom they already were interacting on a regular basis. District authorities trained drug wholesalers and gave them materials (such as job-aids related to malaria) to distribute to small retailers. The intervention generated improvements in malaria prescribing for shops and kiosks. In the intervention district, 32% of shops prescribed the correct drugs for treating malaria, while 3% did so in the control area. There was no measurable impact in clinics and pharmacies. The cost to reach 500 outlets in this way was US\$ 8,000 (Tavrow et al, 2003). This is relatively expensive, but larger scale interventions would probably cost less per outlet engaged, because the fixed costs would be spread over more units. This is consistent with findings in other settings that it is often the less-educated workers who are most responsive to guidance in correct practice.

The evidence that training improves private provider quality is mildly positive, though limited. A recent review of training interventions (including both public and private providers) found that training alone has little or no effect on provider performance (Rowe et al, 2009). However, when paired with other supporting interventions (e.g. job-aids) or incentivizing interventions (payment, or in-kind transfers to replace lost income), the evidence suggests training can contribute to improvements. Given that most training initiatives thus far are relatively small, it is not yet clear how cost-effective private provider training will be when done at scale.

### 3.5.2 Improving quality through social franchising

Social franchising is another mechanism to enhance the quality of care by existing providers. Providers are motivated to lift quality, to achieve and maintain their franchise membership – because franchise membership brings more customers and therefore more income. In these initiatives, the franchisor often supports quality for their members by providing access to a quality-assured drug supply, through training, and providing various job-aids. In some cases quality-related investments are also supported with access to capital investment funds. Social franchises resemble commercial franchises like McDonalds, in that existing or start-up businesses choose to affiliate because they will get more business as a franchisee than they would as an independent provider. However, social franchises are established with government or donor support as a means to improve care quality (and sometimes access) by adapting this model.

The coordinating body (the 'franchisor') in a franchise model forms a partnership with the providers (the 'franchisees') to help them improve their operations through training, quality control, trade-marking and branding (Bishai et al, 2008). Social franchising has been used to increase the coverage and quality of health services and products in several developing countries (Montagu, 2002; Prata et al, 2005). Although it has most often been used for reproductive health services (Stephenson et al, 2004; Agha et al, 2007)<sup>22</sup>, TB services were recently franchised in Myanmar alongside a reproductive health franchise, with promising results (Lonnroth et al, 2007). In theory franchising is an instrument that could also be applied to enhancing quality of care of child health services. As yet, there is too little evidence to assess the effectiveness of this strategy for child health.

<sup>22</sup> See the family planning chapter for a discussion of the evidence on franchising.

### 3.5.3 Improving quality through accreditation

Accreditation is similar to franchising in having a clear quality-control function. However, unlike franchising, there is usually no ongoing relationship or contract between the provider and the accreditor. The association is often voluntary, compared with the contractual relationship between the franchisee and the franchisor. The accrediting body may be the government or an NGO, which provides oversight of services offered by the provider at organizational or facility level. The strategy includes an independent assessment of quality, and may also encompass training for providers in standardized practices (Smith et al, 2001). Similar to franchising, the mechanism entails motivating voluntary quality improvements, with the incentive being achieving a status that brings increased business.

Accredited providers are motivated to improve the quality of their services by the possibility of attracting more customers and increasing sales. To support this, accreditation initiatives include promotive activities to make potential customers aware of the benefits of going to an accredited outlet or provider. In Tanzania, accreditation was used to improve drug seller practices in stocking and dispensing malaria medicines (Brieger et al, 2005).

### 3.5.4 Regulation to improve service quality

Although most health systems in developing countries clearly need a stronger regulatory framework, there is no evidence of the effectiveness of specific strategies to strengthen regulation. In developed countries, regulatory interventions ensure that the health services provided are of adequate quality. They take the form of rules, enforcement systems and sanction mechanisms, and are applied to health care providers, organizations or facilities (Patoulliard et al, 2007). At the provider level, regulations include licensing and certification of providers, and may require them to train their staff before and after they begin employment (Waters et al, 2003). At the organizational or facility level, regulations stipulate the minimum levels of equipment and number of trained staff required at facilities to ensure quality (Conteh and Hanson, 2003). In addition, consumer protection legislation may be used to provide redress directly to patients where medical practice has been inappropriate. Undoubtedly, a range of actions should be taken to strengthen capacity in many of these areas. And, experimentation combined with rigorous research should be prioritized in this regard.

### 3.5.5 Regulation to address product quality

Products are typically easier to regulate than services. And, one area where a regulatory intervention has been effective is in the control of breast-milk substitutes. Breastfeeding is recognized as the ideal way of providing young infants with the nutrients they need for healthy growth and development (WHO and UNICEF, 2003). A 2003 study of child survival strategies identified exclusive breastfeeding in the first six months of life, and continued breastfeeding from six to 12 months, as the single most effective way for mothers to give their babies the best chance of survival, with the potential of saving 1.2 million lives annually (Jones et al, 2003).

Virtually all mothers can breastfeed, provided they have accurate information and the support of their families and the health care system. However, like the other interventions we've discussed, strategies to increase breastfeeding have largely been ineffective, and rates have remained stubbornly low in developing countries. The 'Countdown to 2015' found that the average rate was only 28% in the 68 priority countries that account for 95% of all children under five who die each year (Bryce et al, 2008).

One reason for low breastfeeding rates is that outreach services, designed to increase women's understanding of breastfeeding, often function poorly at community level, which has been hard to fix (see discussion in section 3.2 above). However, the problem has been exacerbated by aggressive marketing of breast-milk substitutes by private sector companies, which has persuaded many women who could breastfeed to use formula milk. To counter this, the World Health Assembly adopted the International Code of Marketing of Breast-milk Substitutes in 1981 (WHO, 1981). The code stipulates that there should be no promotion of breast-milk substitutes, bottles or teats to the general public, and that neither health facilities nor health professionals should have a role in promoting breast-milk substitutes. It also says that free samples should not be provided to pregnant women, new mothers or families. Sixty-five countries have enacted legislation implementing all or many of the provisions of the Code, with positive results. A recent study found an association between adoption of the Code and exclusive breastfeeding rates, implying that it makes a difference when properly implemented (Cavagnero et al, 2008).

#### 4. Why has progress been slow?

To date, the full potential of the private sector to improve child health has not been tapped. The reasons are many and varied, but a major factor is the approach taken by international organizations, and especially donors, to child health programs in developing countries. In this section we analyze the role they have played in facilitating, or discouraging, the engagement of private sector actors. Much of the information about how donors influence program design and implementation is qualitative. In order to broaden the perspectives reflected in this section of our paper, we canvassed a range of informants about the topics discussed here (see Annex 2 for a description of the interviews and methodology).

Historically, the key players in child health have been WHO and UNICEF for technical approaches, and the US, the UK and the World Bank for funding. More recently some funding has been provided via the Global Fund to Fight AIDS, Tuberculosis and Malaria, and significant funding for immunization via the GAVI Alliance. Until the mid-1990s, most programs took a ‘disease-by-disease’ approach to child health. This approach involved pursuing increased use of antibiotics to reduce deaths from pneumonia, using ORS to reduce diarrheal deaths, and supporting immunization coverage to reduce deaths from vaccine-preventable illnesses.

In the late 1990s, the IMCI program was the subject of intense discussions and work by several partners, including USAID, the UK’s Department for International Development (DFID), and the World Bank. A large forum to discuss the issues was held in 1999 under the slogan ‘IMCI brings it all together’. Subsequently, most support to improve child health applied much or all of the IMCI program approach. WHO and UNICEF both worked through their regional and in-country advisors and support structures to advocate and provide support for the implementation of IMCI in countries. The structure of program support was strongly influenced by the organizations’ pre-existing relationships with member states (whose representatives are drawn from government bodies). This influence encouraged a mode of operating that focused almost entirely on health ministries and other government bodies.

Some of the key financing agencies also focused most of their support on the public sector. For example, World Bank child health projects (or components) tended to support upgrading of facilities, as well as training of public health workers. Few World Bank projects supporting child health engage private providers (Axelson et al, 2003). From our research, DFID does not appear to conduct a systematic review or financial analysis of the type of providers it supports in its child health programs. However, project information on DFID’s website indicates most financial support is allocated to the public sector. Somewhat surprisingly, a recent review found that USAID also focuses most support and attention on the public sector, with the exception of family planning programs (Bowers et al, 2010).

Through their programs, UNICEF, WHO and the World Bank often tended to focus on improving the work of the public sector, and on increasing outreach activity. However, the public sector focus either didn’t get results or didn’t reach enough people, while the outreach activities either were not implemented effectively or quickly deteriorated. WHO and UNICEF program monitoring primarily focused on IMCI ‘coverage’, defined as the number of health workers trained in how to identify and treat illness appropriately in a given geographical area. The actual coverage of the interventions (in terms of people using the services), was only measured through the DHS and later MICS (multiple indicator cluster surveys) every five years, with no direct link to program monitoring or management. Also, baseline utilization patterns were rarely if ever examined to gain a more accurate understanding of who was using the frontline public clinics which were to be strengthened. The result was that the actual reach of program efforts was not monitored, and in many cases programs that were failing to reach a

majority of children were continued without proper review or much-needed adaptation. The assumptions underlying the IMCI program design were that the public sector was reaching most children, and that quality improvements resulting from IMCI would persuade those people using the private sector to switch. These assumptions proved unfounded, and led to the omission of the private sector from programs, even in countries where private providers were actually seeing the large majority of sick children (see Box 3).

Leaving out the private sector, and more importantly, its users, contributed to disappointing results in early experiences with IMCI, as discussed in the early part of this paper.<sup>23</sup> IMCI sometimes does improve public services, but people using the private sector don't shift in large numbers to public services as a result. Box 4 describes the IMCI experience in Bangladesh, where the program implementation and evaluation provides compelling evidence about the tendency to overlook the private sector when designing child health programs. It also highlights how omitting the private sector, in a country where the public sector reaches only a small proportion of sick children, severely limits the ability of improved public services to reduce mortality at the population level.

#### **Box 4: IMCI in Bangladesh – A program that missed most children**

In a cluster randomized trial, 20 first-level government health facilities in the Matlab sub-district of Bangladesh and their catchment areas (total population of about 350,000) were paired and randomly assigned to either IMCI (intervention; ten facilities) or usual services (comparison; ten facilities). The trial began in early 2002. All three components of IMCI were implemented in the intervention facilities – health worker training, health systems improvements, and family and community activities – to give the strategy the best chance of demonstrating its effectiveness. Impact information was collected from household and health facility surveys. These tracked the intermediate outputs and outcomes, and nutrition and mortality changes, in both intervention and comparison areas.

The IMCI program generated improvements in public clinics, including health worker skills and health system support, in the intervention areas. It led to increased exclusive breastfeeding rates and reduced stunting rates. It also resulted in improved family and community practices that led people to seek health care from appropriate providers. For example, the proportion of children in IMCI areas who were sick in the two weeks preceding the survey and taken to an appropriate provider increased from 9% to 20%, while the rate in comparison areas remained below 10%.

However, despite the improved performance of health workers from the IMCI training and improved careseeking behavior, this improvement was insufficient to reduce mortality at the population level, because of the relatively small number of sick children taken to public facilities (even after quality improvements).

Source: Arifeen et al, 2009.

<sup>23</sup> Other reasons for the disappointing results were a failure to build the community component adequately, non-responsive referral units, and an inability to see the IMCI approach as more than just a training program.

#### *Attempts to work with the private sector*

From 1999 to the present day, it has become increasingly evident that many countries will not achieve significant child health improvements without working with the private sector (Bustreo et al, 2003). Indeed, the IMCI multi-country evaluations provide strong evidence of this fact.<sup>24</sup> A number of problems with IMCI and the private health sector, which undermine program impact, are:

- The private sector is used extensively in many countries where child mortality is high
- There was no pre-program assessment to ensure that public-sector-focused IMCI activities would reach most children
- It has become clear that people don't switch from private to public providers even when there are quality improvements in the public sector.<sup>25</sup>

Some agencies attempted to draw the attention of policy makers and funders to the important role that private providers have for child health. Among them the SARA project (Support for Analysis and Research in Africa), supported by USAID, played a pivotal role in highlighting the impact that engaged private practitioners can have on child survival. This led to a meeting to discuss private sector engagement in child health programs in Uganda. The World Bank also attempted to stimulate the creation of an inter-agency working group on child health and the private sector (Waters et al, 2002). However, this did not generate much interest among international agencies. It did not affect policies in countries. A few small pilot projects were launched in countries, mostly with external financing, though these were not rigorously evaluated (Bustreo et al, 2003). Further progress in the policy debate has been hampered by the limited availability of evidence to show which policies most effectively influence the private sector to contribute to the reduction of child mortality, and in which settings.

This lack of support from international agencies meant that there were few fora in which the issue of private sector involvement was discussed. It also meant the international agencies did not provide systematic ongoing support to identify the most suitable policy measures for harnessing the private sector contribution in child health. Unlike some global programs (Box 5), child health programs in country and at the global level receive no systematic help to analyze whether they need to engage the private sector and how to do so.

<sup>24</sup> IMCI Multi-country evaluation (MCE), see <http://www.who.int/imci-mce/>

<sup>25</sup> One reason is that quality improvements in the public sector – e.g. in knowledge of clinical guidelines and drug use – were not accompanied by strengthening of the health system e.g. to provide drugs and adequate supervision.

**Box 5: Involving private providers in tuberculosis care - The Public-Private Mix Initiative**

In many countries, patients with symptoms of tuberculosis (TB), including the very poor, seek and receive care from a wide variety of health care providers - including from outside the network of national TB program (NTP) services. Recognizing the significance of engaging these providers in addition to the traditional public health sector, WHO launched the Public-Private Mix (PPM) approach in 2000. This approach encompasses all forms of public-private links (between NTP and the private sector), public-public (between NTP and other public sector care providers) and private-private (e.g. between an NGO or a private hospital and the neighborhood private providers) collaboration to ensure provision of TB care in line with international standards.

Studies have demonstrated the positive contribution of PPM to case detection and cure rates, while reducing the financial burden on poor patients. It has been estimated that PPM initiatives have contributed to a 10%-40% increase in case detection. Engaging all providers through PPM approaches and promoting the International Standards for Tuberculosis Care are now among the core components of the Stop TB Strategy and are acknowledged as essential to meet the TB-related MDG.

The Subgroup on Public-Private Mix for TB care and control was established by the Stop TB Partnership's DOTS Expansion Working Group to help develop global policy on PPM and assist countries to develop and implement national policies and guidelines to engage all care providers. One of its objectives is to provide a global forum for sharing ideas, experiences and best practices related to PPM development, implementation and scale-up.

Source: Stop TB Partnership, 2010

Finally, when comparing approaches to AIDS, TB and malaria, no specific funder for IMCI has well-established mechanisms to link with the private sector. This contrasts with the example of the Global Fund, which has used the country coordinating mechanism (CCM) to provide for financing of AIDS program activities which are implemented with private sector collaboration.

It's not entirely clear why IMCI programs continue to omit the private sector to the present day. Partly it's because there is no global forum for objective scrutiny of performance and program revision. Partly it relates to the metrics most commonly used to measure program outputs, which can mislead program monitors into thinking they are making headway when they are not. Certainly, some funders, like the World Bank, have mandatory rules requiring they allocate all funds to the public sector - which undoubtedly makes private sector engagement or stewardship activities harder to support.

Very few child health programs include metrics that help them to change course if things are not working out. One that did was a program in Nicaragua, set up to increase coverage of services in underserved rural areas. At first it applied a conditional cash transfer, believing that people didn't value the services enough but would use them more if welfare payments were tied to use. However, after a year of implementation, metrics showed that use wasn't increasing, and that the problem lay with lack of services in the targeted areas. The program started contracting private providers to deliver services in those areas, and many more people began to use them. The program could only be adjusted to achieve its goals because utilization was being closely monitored - allowing the program team to discover they had initially misdiagnosed the problem.

The persons interviewed during research for this paper mentioned several interesting factors making private sector engagement difficult. These are set out in Box 6.

**Box 6: Not dancing to the same tune? Constraints to private sector engagement**

Efforts to involve the private sector in child health more systematically are hampered by constraints that involve the private sector, the public sector, and/or donor organizations.

**1. Private sector**

Here, constraints to greater involvement include:

- Lack of regulation or accreditation, which may lead to over-charging or poor-quality service
- The high-risk nature of public-private partnerships, which discourages private actors
- The fragmentation that arises from the unorganized and sometimes informal nature of the private actors in health care.

*"The private sector needs to be more organized, because governments and donors cannot interact easily with a fragmented base of many private actors."*  
(World Bank official)

**2. Public sector**

Constraints here include:

- Governments' view that the private sector is competing with them for funding and service provision
- Lack of skills to structure and manage private engagement
- Lack of external support for working with private providers
- Limited awareness of the ways in which the private sector can be engaged
- Poor regulation, corruption and lack of transparency.

*"Governments have the mentality that each dollar spent on the private sector is a dollar not spent on themselves."*  
(World Bank official)

**3. Donors**

Donors are affected by:

- Operating constraints related to working with national governments as their main partners
- An ideological aversion to working with a profit-seeking private sector
- Certain long-standing approaches that subsidize public delivery, and crowd out the private sector.

*"Most donors tend to be ideologically inclined to work with the public sector. The idea of working with private players who make profits from the provision of health services is not very palatable to donors involved in health and development issues."*  
(Bilateral donor agency member)

## 5. Lessons learned

In contrast with many other public health programs, in child health there is no global agency or forum where the active donors and country representatives can come together to review program effectiveness and adapt strategies. Despite the collaboration of several major actors (WHO, UNICEF, USAID) over a number of years to evaluate IMCI programs in key countries – and the problems revealed – there has yet to be any direct action to change child health program guidelines. The global child health effort is notable for this surprising lack of feedback and mechanisms to improve program effectiveness. The deficiency is particularly worrying since the IMCI evaluations found that the programs were not successful in reducing child mortality. The situation, therefore, warrants several changes, which we attempt to articulate below.

### 5.1 Changes in approach

First and foremost, the starting point for designing effective child health programs in developing countries must include assessment of where people are currently seeking care, including use of private providers. Without this information, programs cannot be designed to reach all segments of the population.

Program design guidelines should be adapted to include assessment of private provision and development of strategies to engage the private sector. Such adaptation of program guidelines has been critically important for the improvements seen in TB programs. In TB programs, continuous support, at the global and country level, for implementation of new strategies for private sector engagement has been available, and has made a significant contribution to the improvements in program effectiveness. The establishment of similar support structures for child health would increase the chances of effective and sustainable collaboration with private providers.<sup>26</sup>

In countries with substantial private sector capacity, engagement of private sector actors should be considered where it is needed to reach large numbers of sick children. In addition, we must look specifically at where poor people go for their services and products. The strategies needed to reach them must be considered with special attention.

### 5.2 Feedback loop

Secondly, new program performance metrics are needed. These should enable programs to maximize the effectiveness of their activities and reveal where and how private sector actors are engaged and whether this engagement produces results. It is absolutely necessary to change program monitoring so that information from household surveys, and information from independent facility surveys, can be used to check program impact and to inform changes where needed. Program monitoring needs to take into account current government constraints (Box 7 provides views from government officials interviewed for this paper), which necessitates independent surveys on a frequent basis (see Box 8 for donor interviewees on this topic). A good step in this direction is the recently agreed increase in the frequency of MICS conducted by UNICEF in low- and middle-income countries, from every five years to every three years. It should be a priority to begin using data directly from these surveys – and from DHS – for program monitoring of private sector engagement.

<sup>26</sup> See the TB chapter for further discussion.

Child health programs also need to focus on the importance of reaching the poorest children. They are using the lowest-quality private providers, who are the hardest to engage in programs. A few strategies have brought them into programs, but evidence for effectiveness is weak, so program monitoring particularly needs to record what is happening with utilization and quality of these providers' services.

**Box 7: Conducting the orchestra and monitoring the music**

**Government Views on Monitoring and Evaluation**

It's a sad fact that while monitoring the effectiveness of child health programs needs to be improved, lack of government capacity hampers efforts to do so. Low-income countries often do not have the information systems and resources required to track child health indicators on a regular basis. Monitoring and evaluation (M&E) can be strengthened by involving district-level health workers and local communities in collecting and analyzing data. In fact, where NGOs are involved in the local delivery of programs they contribute to M&E efforts.

*“The Ministry of Health supervisory system does not have adequate capacity to collect, analyze, and disseminate data. The monitoring currently in place tends to be process- rather than results-oriented.”*

(Former official of the Ministry of Health of a developing country)

**Donor Views on Monitoring and Evaluation**

As with other health programs, there is a strong need to improve M&E of child health initiatives. Programs, and especially budgets, should incorporate M&E right at the planning and design stages. Moreover, to be effective, M&E should be undertaken by an external and independent agency. Independence is particularly important, because government M&E efforts are often biased and ineffective. In cases where monitoring exists, quality control needs to be better enforced so that evaluation results can be published. There is a need for a new paradigm on M&E methodology that is consistent across countries, so that it is easier to draw general conclusions. Improved M&E will motivate expansions of program approaches to include private sector engagement, where this is needed to achieve program goals.

*“Effective monitoring requires independent audit of Ministry of Health data and independent surveys by external agencies.”*

(World Bank official)

**5.3 Changes in strategies**

Thirdly and most importantly, based on experience to date, how can progress be achieved rapidly? Which instruments work, and what is required to implement them and expand their application to achieve a higher coverage among children under five? We argue that what is needed for child health is essentially what is needed for primary health care – namely, strategic, evidence-based application of mechanisms to improve care of sick children wherever they are taken. With this in mind – and recognizing that health systems' foundations, such as the government's stewardship function, are critical for success – the most promising strategies are as follows.

For improving coverage of services:

- **Contracting and performance-based contracting** should be expanded (along with capacity to design and enforce contracts), because the key goal is to achieve expanded coverage of a package of priority interventions of good quality. This instrument has been proven to be effective.

Alternatively:

- **Conditional cash transfers** should be considered where low demand for prevention-promotion services among the poor is a significant problem, and adequate additional supply is available.
- **Vouchers** to increase access to priority services and products, where there is demand but users cannot afford to pay.
- **Insurance subsidies** to stimulate demand for key child health interventions.
- **Social marketing** should be considered for expanding use of priority products where weak demand is an issue (e.g. ORS, bednets).

Many private providers will often continue to find customers for their services and products. Therefore, programs must include activities to raise the quality of the services and products they provide.

For improving quality of services:

- **Accreditation** should be considered where poor quality private services need to be improved.
- **Training**, combined with support for better practice, and/ or incentives should be considered.

Franchising and regulation are other potential mechanisms to improve quality. Some have not been applied to child health in a significant way and some have been inadequately evaluated, but the evidence that does exist suggests that they could be successfully applied to improve the quality of child health care of private providers. To build the evidence base it is critical that all mechanisms are properly evaluated when they are applied in child health programs.

For very important privately purchased goods and services, such as artemisinin-combination therapy (ACT) for malaria, direct action should be taken to improve quality. A promising example is the Affordable Medicines Facility: malaria (AMFm) financing mechanism, launched in April 2009. This international collaboration aims to reduce the price of ACTs by means of an upstream subsidy so the subsidized effective drug can drive older, ineffective drugs out of the market. The success of this initiative is critically important for child health. It should be complemented by activities to help ensure that users are aware of the best-quality health brands, and to **encourage providers to sign up to accreditation schemes that certify retailers for ensuring adequate quality of drug dispensing.**

Additional suggestions have emerged from our interviews with experienced practitioners (Box 8).

**Box 8: Suggestions from experienced practitioners**

Our interviewees offered several suggestions for addressing the constraints to private sector engagements:

- Mapping the formal and informal private operators at community level and getting baseline information on utilization to facilitate better program design
- Including private providers in training activities and linking them with public health delivery policy and systems, and
- Educating the public sector on the mechanisms and tools available to work with the private sector to expand opportunities for communication between the sectors. For example, for one of the tools – contracting – such activities may include training and continuous support on (a) how to assess appropriateness of contracting in a given context; (b) design, including specification of services and quality; (c) monitoring and evaluation, including a strategy for how to measure volume and quality of services, and payment; and (d) issues related to non-performance.

#### 5.4 Changes in donor support

Finally, donors that focus solely on the public sector must shift towards inclusive approaches where the setting makes it necessary to reach children. In doing so, they can take advantage of a critical window of opportunity that will exist for the next few years of additional funding for child health. Global commitment to maternal and child health has increased at the political level, as shown by increased official development assistance for maternal and child health from 2003 to 2007 (Requejo and Bryce, 2010), so now is the time to demand more health for the money. Donors can facilitate the implementation of the technical changes designed to increase private sector engagement, described above, by insisting on:

- Analysis of service utilization before strategies are selected
- Consideration of alternative strategies involving the private sector for achieving child health goals
- Monitoring of population-level statistics, and
- Facility data that is independently collected (ensuring this data is used to adjust programs where needed).

However, these improvements will not be achieved easily. Concerted, collaborative and continuous action on the part of the key funders is required to change the existing, often ineffective, program approaches. The key actors must figure out how to do this. The Partnership for Maternal, Newborn & Child Health (PMNCH) offers a potential opportunity and platform. While other global health alliances, such as Roll Back Malaria and Stop TB, have explicitly worked to support countries in public-private collaboration, the PMNCH has yet to do so. However, a positive sign is that more than 50% of the board is composed of non-state actors, such as health care professional organizations, NGOs, academics and research institutions. Experience from other similar alliances, such as the Stop TB Partnership (Box 4), has shown that the creation of a specific private sector working group – to generate ideas, innovation, evaluation and plans for private sector engagement – can be very productive. PMNCH is uniquely positioned to lead the discussion about private sector engagement and the effectiveness of child health programs.

## 6. Conclusions

Our analysis, combined with observations from our interviews with experienced practitioners, reveals growing recognition among donors and governments that effective primary health care, including child health delivery, often requires the engagement of the private sector. Private sector engagement is central to reaching people in their communities and in their homes, where child health interventions need to reach to make the biggest impact. Distinguishing among the various private actors, including the for-profit and not-for-profit sectors, and organized and informal players, is a serious challenge, but is a necessity for designing programs that will reach the children they are aiming to help. Depending on which part of the private sector one needs to mobilize for a child health program, one can select from a range of strategies that have proven useful. To date, however, few except for contracting have been scaled up to a national or regional level, and many have yet to prove sustainable.

While it may make sense to involve the private sector in an initiative with narrow objectives (e.g. expanding ORS or bednet use), the benefits of wider involvement may be less clear in many countries that still face serious challenges in expanding access to basic services. Some interviewees suggested that an integrated approach to combining child health care delivery with other primary health services is perhaps more attractive. The evidence for contracting shows that it has often been successful in generating significant expansions in coverage across a range of country settings. This implies that contracting for primary care should be considered as a core element of child health initiatives in countries where access is a serious constraint to child health improvements.

At a macro level, it is vital that the political will and commitment exist to expand private sector participation, as well as coordination and communication among the multiple stakeholders. We hope that this paper has offered some ideas, and will help provoke the reactions and commitment needed to achieve lasting improvements in the programs that aim to improve the health of children.

**Annex 1: List of countries and year of survey included in the analysis of Demographic and Health Surveys**

Country	Year
Armenia	2005
Bangladesh	2004
Benin	2006
Bolivia	2003
Brazil	1996
Burkina Faso	2003
Cambodia	2005
Cameroon	2004
Central African Republic	1995
Chad	2004
Colombia	2005
Comoros	1996
Congo Brazzaville	2005
Cote d'Ivoire	1999
Dominican Republic	2002
Egypt	2005
Ethiopia	2005
Gabon	2000
Ghana	2003
Guatemala	1995
Guinea	2005
Haiti	2005
Honduras	2005
Indonesia	2003
Kazakhstan	1995
Kenya	2003
Kyrgyz Republic	1997
Lesotho	2004
Madagascar	2004
Malawi	2004
Mali	2006
Moldova	2005
Morocco	2004
Mozambique	2003
Namibia	2000
Nepal	2006
Nicaragua	2001
Niger	2006
Nigeria	2003
Peru	2004
Philippines	2003
Rwanda	2005
Senegal	2005
South Africa	1998
Tanzania	2004
Togo	1998
Uganda	2006
Uzbekistan	1996
Vietnam	2002
Zambia	2002
Zimbabwe	2005

## Annex 2: Purpose and methodology of key informant interviews

To provide up-to-date information for this paper, The Partnership for Maternal, Newborn & Child Health (PMNCH) commissioned Cambridge Economic Policy Associates (CEPA)<sup>27</sup> to consult by telephone with a wide range of national and international stakeholders, and to report analysis and conclusions. A key objective was to gain a better understanding of the effectiveness of child health initiatives globally in reducing child mortality. Another was to examine opportunities for the private sector to become involved in the delivery of child health strategies and programs, and to identify the main constraints. The broad definition ‘private sector’ covers formal and informal, and for-profit and not-for-profit, providers of health and related services. These include private hospitals and clinics, community care organizations, health care workers and professionals, private pharmacies and drug sellers, retailers, food fortification companies and insurance providers.

A semi-structured list of questions was used to guide the consultations and to ensure that responses were broadly in a consistent format. CEPA spoke to representatives of national governments, NGOs, multilateral and bilateral donor agencies, foundations, and child health practitioners and experts. The list of interviewees was provided by PMNCH and is set out below.<sup>28</sup> Twelve telephone interviews were conducted from mid-May to early-June 2009 and a summary report was prepared. This was based on the consultations and on brief extracts from reports referred to by some of the interviewees. Although due care has been taken, the accuracy of interviewee statements has not been corroborated by detailed secondary research.

<sup>27</sup> CEPA is a UK-based consultancy.

<sup>28</sup> Eduardo Banzon, World Bank; Aboubacry Thiam, BASICS; Jesca Sabiiti, Ministry of Health, Uganda; Tonia Marek, World Bank; Loraine Hawkins, World Bank; Stan Bernstein, UNFPA; Claudia Rokx, World Bank; Liz Mason, World Health Organization; Rudolf Knippenberg, UNICEF; Jim Tulloch, AusAID; Dan Kraushaar, Bill and Melinda Gates Foundation; Suzanne Prysor-Jones, Child Health Expert.

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