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# The Questionable Power of the Millennium Development Goal to Reduce Child Mortality

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*The Power of Numbers: A Critical Review of MDG Targets for Human Development and Human Rights*

## Preface

This paper is one of a series of papers in a research project, *The Power of Numbers: A Critical Review of MDG Targets for Human Development and Human Rights (the "Project")*[1]. Motivated by a concern with the consequences of the Millennium Development Goals (MDGs) beyond the achievement of the 2015 targets, the Project seeks to explore their broader policy and programmatic implications. It focuses particularly on the reductionism inherent in the way in which these global goals were set and came to be used, as well as the potential for distorting priorities and marginalizing, or even displacing, important human development and human rights concerns inherent in such global goal-setting exercises. A total of 11 studies are included, each analyzing the normative and empirical consequences of a particular MDG goal/target, and considering what other targets and indicators might have been more appropriate. The Project aims to identify criteria for selecting indicators for setting targets that would be more consistent with Human Development and Human Rights priorities, amenable to monitoring impacts on inequality, accountability and consistency with human rights standards. Although this paper is currently accessible as a free standing working paper, it should be read in conjunction with the synthesis and background papers of the Power of Numbers Project. These papers provide necessary information about the scope of the Power of Numbers Project, the historical framing of international agreements leading up to the MDGs, and the human rights and human development frameworks referenced in the paper. These working papers are expected to be compiled as a special issue of the *Journal of Human Development and Capabilities.*

[1] An independent research project, coordinated by Sakiko Fukuda-Parr at The New School and Alicia Ely Yamin at Harvard School of Public Health. Support from the UN Office of High Commissioner for Human Rights, UN Development Programme, Frederick Ebert Stiftung, Dag Hammarskjöld Foundation, and the Rockefeller Foundation are gratefully acknowledged.

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**The Questionable Power of the Millennium Development Goal to Reduce Child Mortality**

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The story of child survival since 2000 is a story of success. During the last 20 years, the period covered by the Millennium Development Goals, the annual number of children dying before their fifth birthday has decreased from around 12 million to about 6.9 million. This represents a decline of 41percent from a global average under-five mortality rate of 87 per 1000 live births in 1990 to 51 per 1000 in 2011. In other words, 14,000 fewer children died *each day* of 2011 than was the case two decades earlier. All regions of the world have experienced a considerable reduction in child mortality rates, but progress is uneven both among and within countries, with certain segments of the global society being left behind. The pace of progress in child mortality has also accelerated to 3.2 percent per year in the decade following the Millennium Declaration, compared to only 1.8 percent between 1990 and 2000 (UNICEF, 2012a). In this paper we address the question of whether the empirical fact of sharp reductions in child mortality can be attributed to policy choices made in response to the normative appeal of MDG 4 and to the technical selection of its target and indicators.

## Background to framing MDG4, its target and indicators

### *Introduction*

The United Nations Millennium Declaration of September 2000, unanimously adopted by 189 countries, highlighted freedom, equality, tolerance and solidarity as fundamental values for international relations in the 21st century, and committed signatories to

> "…collective responsibility to uphold the principles of human dignity, equality and equity at a global level….in particular, [to] the children of the world, to whom the future belongs."(UN, 2000: para 2)

Yet these universal values of the Millennium Declaration did not survive the extensive process of establishing goals and targets to monitor its implementation. The Millennium Development Goals, MDGs, largely aimed to improve average outcomes around a range of basic needs, divorced from equal rights. Among the goals for the children of the world was MDG 4: Reduce Child Mortality, with a single target to "Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate". This target came to be monitored via three indicators: the under-five mortality rate (U5MR), the infant (under-one) mortality rate (IMR), and the proportion of one-year old children immunized against measles.

Unlike some other MDGs, reduction of child mortality by two-thirds had been included in the Millennium Declaration (UN, 2000, para 19), and thus can be considered as explicitly approved by the member states, and undergirded by the Millennium Declaration's aim "To strive for the full protection and promotion in all our countries of civil, political, economic, social and cultural rights for all" (UN, 2000, para 25); embedded in human rights are the principles of equality and non-discrimination, participation, indivisibility and interdependence and accountability and rule of law.

The Convention on the Rights of the Child (CRC) which by the year 2000 had been ratified by 192 countries, sets out the norms and principles governing the human rights of people under the age of 18; reduction of child mortality by two-thirds can be seen as a benchmark in the progressive realization of the Convention's Article 6, which establishes 'every child's inherent right to life', and States' obligation 'to ensure to the maximum extent possible the survival *and* development of the child' [emphasis added]. The right is not merely to survive, but to thrive. Article 24 (1) obliges States parties to 'recognize the right of the child to the enjoyment of the highest attainable standard of health [and]…to ensure that no child is deprived of his or her right of access to health care services'. Article 24 (2) recognizes the complexity of the right to health that must be accompanied by 'appropriate measures to:

(a) Diminish infant and child mortality;
(b) Ensure the provision of…health care of all children with an emphasis on the development of primary health care;
(c) Combat disease and malnutrition…

(d) Ensure appropriate pre-natal and post-natal health care for mothers;
(e) Ensure that all segments of society, in particular parents and children, are informed. …And supported in the use of basic knowledge of child health and nutrition…
(f) Develop preventive health care, guidance for parents and family planning education and services.'

CRC Articles 6 and 24 clearly demonstrate the interdependence of a child's right to survival and development with his or her right to health[2]. Thus had MDG4 been formulated within the human rights framework of the Millennium Declaration, its targets and indicators should have reflected this interdependence, among other principles. In fact, as this paper will explore, in both formulation and implementation, MDG4 was un-tethered from the Millennium Declaration, as well as from the CRC and other human rights norms and standards. Moreover, the elite process and narrow framing of the MDG target and indicators also represented a rupture with a quarter-century of global effort to advance child survival in tandem with child health. For children worldwide, the establishment and pursuit of MDG4 had consequences, intended and unintended, which this paper aims to document as a contribution to the post-2015 development agenda.

*Historical background to MDG4's target and indicators: From the 1977 World Health Assembly to the 1990 World Summit for Children and its aftermath.*

The goal of reducing child mortality has a very long pedigree in the United Nations; as early as 1977, the World Health Assembly set an ambitious goal for reducing IMR to 30 per 1000 live births by 1990 (WHO, 1977), at a time when the global IMR averaged above 80/000, and above 120/000 in Africa (Moser *et al*., 2005: 203). Likewise, the Assembly set the ambitious goal of 100 percent children fully immunized by 1990, 100 percent enjoying the satisfaction of their minimum nutritional. The next year, the goal of "Health for All by the Year 2000" was declared at Alma-Ata (WHO, 1978), and endorsed by 134 countries. The Alma Ata Declaration confirmed health as a human right and condemned 'the gross inequality in the health status of the people particularly between developed and developing countries as well as within countries', an inequality which would be addressed by the adoption of a strategy of primary health care (PHC)

[2] A recent General Comment on the Child's Right to Health (United Nations, 2013a) elaborated this relationship between survival and health, and the key determinants of children's health, including the realization of the mother's right to health.

'made universally accessible to (…) the community through (…) full participation and at a cost that the community (…) can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.' Although the Alma Ata Declaration preceded the human rights-based approach to development by some twenty-years, it reflected human rights principles of equality and non-discrimination, and of participation. In encouraging national and community adaptations, the Alma Ata Declaration also embedded the provision obligating States to fulfill social rights to the 'maximum extent of its available resources' as stipulated in Article 2.1 of the International Covenant on Economic, Social and Cultural Rights, which had entered into force just two years before (UN, 1966). The strategy of PHC came to dominate health policy in the years to come; by 'bringing health care as close as possible to where people live and work' and empowering people to participate in the realization of their right to health. PHC was the vehicle by which the World Health Assembly's goals for child immunization and survival would be, indeed could only be, effectively pursued.

But the 'take-off' for universal child immunization was slow perhaps because no mechanism for implementation had accompanied the far-sighted goals. By 1981, the average level of infant mortality in the poorest countries stood at 140/000, and the percentage of children fully immunized against measles only 17 percent, on average (UNICEF, 1984). More than 4,000 children per day, one every 2 seconds, were dying before their fifth birthday (UNICEF, 1982).

James Grant, Executive Director of the United Nations Children's Fund (UNICEF), was outraged that the world greeted the equivalent of '120 jumbo jets filled with children crashing daily'[3] with apathy and inaction. Appointed in 1980, he set to work building international alliances to share the goal of increasing child survival, alliances which joined a 'Child Survival Revolution' by implementing a package of interventions that tackled known causes of mortality: growth monitoring, breast-feeding and food supplementation to improve child nutrition and resistance to disease, oral rehydration salts to prevent diarrhea's mortal impact, immunization to protect the child against potentially fatal diseases, family planning to space births and female education to empower mothers with knowledge of how to ensure their children's survival. The

[3] James Grant frequently used this image to impress upon decision-makers how outrageous it was that so many children were dying daily, silently, without the public outcry or demand for investigation which would have ensued had an equivalent number of children died in plane crashes.

package was known as GOBI-FFF, and recognized not only the interdependence of child mortality and child health by addressing top causes, but also the interdependence of children and women in the struggle to improve child survival. A target was set for each element in the package of interventions, but due to immunization's relative simplicity, the goal for 80 percent coverage or 'universal' child immunizations (UCI) by 1990 (UCI 1990), eclipsed other elements of GOBI and became a rallying cry for national governments and UN agencies alike. UCI 1990 was a highly successful initiative, such that UNICEF and WHO were able to certify that the goal had been reached in September 1990. It was of course a partial success; 80 percent was far from the universal coverage that the 1977 World Health Assembly had called for, and the global average obscured significant inequalities in coverage between and within countries. Neither the goal of UCI 1990, nor its top-down, vertical implementation process that mobilized rather than empowered communities, could be considered to have reflected any of the human rights principles embedded in the Alma Ata Declaration. Nevertheless, the visibility and success of the UCI 1990 campaign made being associated with the child survival revolution politically desirable, and helped to pave the way for political leaders to support James Grant's vision of the World Summit for Children (WSC) in 1990, and commitments to a much broader range of goals for children (Black, 1996, p. 59).

The WSC built on the political momentum for children generated by the success of UCI; but it was also designed to shift global attention to policies of "Children First", and served as a counter-weight to the Washington Consensus through which the International Monetary Fund and the World Bank imposed structural adjustment programs and policy straight-jackets on poor countries. In 1987, UNICEF published a series of country studies, *Adjustment with a Human Face: Protecting the Vulnerable and Promoting Growth,* which provided evidence of structural adjustment's social impacts: increased infant mortality, declining child health and nutritional status and school attendance, while calling for more child-friendly adjustment policies. Attaining the World Summit goals in the poorest countries would require adjustment with a human face, and reversing the declines set off with the adjustment policies of the 1980s, particularly in Africa, where President Nyerere of Tanzania spoke for many when he protested, "Must we starve our children to pay our debts?" (Black, 1996, p. 157).

The experience of UCI 1990 had allowed UNICEF's leadership to develop a capacity for political engagement and a strong network of political alliances. Preparation of the WSC Declaration and Plan of Action involved an extensive process of consultation among technical experts and depended on the political involvement and support not only of heads of state, but of national civil society, media, religious leaders and parliaments which UNICEF mobilized to promote the Summit attendance (Black, 1996: 28). Goals embedded in the Plan of Action were developed after a long process of consultation within UNICEF and its field offices, and between UNICEF, WHO, and other prominent members of the international health community[4] before further mobilization at country level.

By the time they arrived in New York in September 1990, Heads of State and Government were ready to sign the World Declaration on the Survival, Protection and Development of Children and the Plan of Action to achieve the goals for children by the year 2000. Topped with a call for universal ratification of the CRC, which provided 'a new opportunity to make respect for children's rights and welfare truly universal' (UNICEF, 1990, para. 8), the Declaration called on the participation of all members of society in implementing the WSC Plan of Action and added 'Among the partnerships we seek, we turn especially to children themselves. We appeal to them to participate in this effort' (UNICEF, 1990, para. 22). It would not be until 2003 when the United Nations adopted the "UN Statement of Common Understanding on Human Rights-Based Approaches to Development Cooperation and Programming"[5], yet there were embryonic elements of the coming approach in WSC commitments. These included commitments for the universal ratification of a human rights instrument, the participation of all members of society and

[4] The Task Force for Child Survival was first established in 1984 between UNICEF, WHO, the World Bank, UNDP and the Rockefeller Foundation; in 1988, the Task Force issued Talloires Declaration with an initial set of child health and child survival goals which largely survived the technical and political consultation processes that intervened over the next two years.

[5] At an interagency workshop in May 2003, the UN Development Group agreed to the Common Understanding: .

> "1.All programmes of development co-operation, policies and technical assistance should further the realisation of human rights as laid down in the Universal Declaration of Human Rights and other international human rights instruments.
> *2.* Human rights standards contained in, and principles derived from, the Universal Declaration of Human Rights and other international human rights instruments guide all development cooperation and programming in all sectors and in all phases of the programming process.
> 3. Development cooperation contributes to the development of the capacities of 'duty-bearers' to meet their obligations and/or of 'rights-holders' to claim their rights."

especially of children, and public (if not legal) accountability through the preparation and annual monitoring of National Plans of Action for implementing the WSC goals.[6]

A closer look at the WSC child survival goals in Table 1 reveals that the reduction in mortality goal was supported by several targets for improving child health, and hence for reducing the incidence of diseases that caused mortality. Although analysis of the targets and indicators for malnutrition is not the subject of this paper, given that as late as 2012 malnutrition is associated with one-third of under-five mortality, it is instructive to see the extent to which malnutrition and its causes were addressed in the WSC goals.

Table 1: Goals, sub-goals, targets and processes

| GOAL & TARGET | PROCESS GOAL | SUB-GOAL & TARGET |
|---|---|---|
| Reduction in infant and child mortality rates in all countries by at least one third (1980-2000) or to 50 and 70 respectively per 1000 live births, whichever achieves greater reduction | Maintenance of a high level of immunisation coverage (at least 90 per cent of children under one year of age by 2000) against diptheria, pertussis, tetanus, measles, polio, tuberculosis, and against tetanus for women of child-bearing age | The global eradication of polio |
| | | Elimination of neonatal tetanus by 1995 |
| | | 90% reduction in measles cases and a 95% reduction in measles deaths compared to pre-immunisation level |
| | | 50% reduction in the 7.4 million annual deaths due to diarrhoea in children under the age of five years which would occur in the year 2000 in the absence of oral rehydration therapy, and a 25% reduction in diarrhoea incidence rate |
| | | One third reduction in case fatality rates associated with acute respiratory infection in children under five years. |
| Reduction in severe and moderate malnutrition among under-5 children by half, between 1990 and 2000 | Growth-promotion & monitoring to be institutionalised in all countries by the of the 1990s | Reduction in the rate of low birth-weight (2.5 kilos or less) to less than 10 percent |
| | | Reduction of iron deficiency anaemia in women by one-third of 1990 levels |
| | Dissemination of knowledge and supporting services to increase food production to ensure household food security | Virtual elimination of iodine deficiency disorders |
| | | Virtual elimination of vitamin A deficiency and its consequences, including blindness |
| | | Empowerment of all women to breastfeed their children exclusively for four to six months and to continue breastfeeding, with complementary food |

Twenty-two later, the UN Office of the High Commissioner for Human Rights issued a guide on human rights indicators, dividing them between structural indicators, which include human rights treaties ratified by the State; process indicators, to assess efforts to transform human rights commitments into results, including coverage of public services; and outcome indicators, to assess the result of those efforts in the realization of the population's rights. The guide notes that

[6] Ultimately, 155 countries completed Plans of Action prepared with many sectors of society, all focused on taking action to meet the goals for children. These nationally adapted Plans were monitored annually and progress reports shared with the UN General Assembly.

indicators of process and outcome can usefully be distinguished as flow and stock (UNOHCHR, 2012). It is interesting to note that the WSC Plans of Action monitored structural, process and outcome indicators for child rights, child survival and child health. They did not however, monitor inequality.

*Drivers defining MDG 4's target and indicators 1996-2002*

The genesis of the MDG's targets and indicators followed a very different process.[7] The final list of MDG targets and indicators was prepared largely by technocrats from global institutions, and excluded many of veterans of the child survival revolution who had been so active in the setting of the WSC goals. Several MDGs, including MDG 4, were clearly based on the OECD's international development goals (IDGs) which the donor countries had been working on since publishing *Shaping the 21st Century: The Contribution of Development Cooperation in 1996.* The IDGs were goals that fit the agenda and result-based management methods of donor countries; they were not intended to reflect the framework of universal human rights that undergirded goals set in UN processes. MDG4's target for reducing child mortality by two-thirds between 1990 and 2015 greatly exceeded historical trends and was criticized as being "based on extrapolation from [trend] lines drawn in the 1980s ....more than certainly using data of very poor quality ….more likely to have been affected by political issues of the 1980s than by real progress"(Waage *at al.*, 2010).

Although Kofi Annan presented the MDG list at the 2001 UN General Assembly, only in March 2002, within the Monterey Consensus, were the "goals, targets and commitments of the Millennium Declaration and other internationally agreed development targets" (UN, 2002) informally approved as a common framework for development assistance. With such an elite and non-participatory process, the sense of political ownership of the MDGs could not compare to those of the WSC goals, or of the 2002 WSC follow-up UN Special Session for Children, which came on the heels of the Monterey meeting. The Bush Administration, for one, ignored the MDGs for five years, viewing them as an illegitimate product of the UN Secretariat, rather than a decision of the UN General Assembly (Hulme, 2009).

[7] For a full account of this process see Hulme (2009).

*A competing agenda for children: The UN General Assembly's Special Session on Children*

In May, 2002, the UN General Assembly held a Special Session on Children, at which 190 member states reaffirmed their commitment to "complete the unfinished agenda of the WSC, and to address other emerging issues vital to the achievement of the longer-term goals and objectives endorsed at recent major United Nations summits and conferences, in particular the United Nations Millennium Declaration, through national action and international cooperation" (UNICEF, 2002, para. 3). The Special Session brought, for the first time, children from across the world into its negotiations and produced an Outcome Document, which set out 21 goals. Due to objections from the Bush administration, numerous references to the CRC were removed or watered down, yet CRC principles were invoked and the document established specific targets for improving child health and addressing the underlying causes of child mortality 'in conformity with all human rights and fundamental freedoms'. Among these targets was one which, for the first time in global goal-setting for children, aimed to address the principle of equality and non-discrimination by calling for 'Full immunization of children under one year at 90% nationally with at least 80% coverage in every district'. The goals and targets of the WFC were negotiated and adopted by the full UN General Assembly, contributing to reducing mobilization around MDG 4 for several years, as will be examined in the final section of this paper.

**Consequences of Downsizing the WSC Agenda into one MDG and one target**

*Divorcing indicators to monitor child mortality from indicators of complex causes.*

From GOBI-FFF to the World Summit for Children, it was recognized that reducing child mortality is a complex endeavor, as its causes are diverse, with a distribution unique to each country. Neither the Millennium Declaration nor the MDG agenda included any of the WSC's goals for reducing child malnutrition and its causes, or for improving child health. Moreover, the inter-relationship between child mortality and malnutrition, recognized in every global effort between 1977 and 2000, was severed. Although MDG1 (to eradicate extreme poverty and hunger) includes "prevalence of underweight children under five years of age" as an indicator for malnutrition, it was completely divorced from MDG4 and the WSC outcome target of reducing

severe and moderate malnutrition among under-5 children by half. Furthermore, the single measure of 'underweight children' only indicates inadequate caloric intake and does not identify important micronutrient deficiencies noted in the WSC agenda. By greatly narrowing the agenda for child survival and child health, the MDGs undermined the principle of interdependence and indivisibility of human rights. MDG 4 also ignored the main causes of child mortality, since the indicators chosen would not be able to reflect their evolution.

In 2000, the main cause of death (Bryce *et al*., 2005) for children 1-59 months was pneumonia (19%) followed by diarrhea (17%), other causes (10%), malaria (8%), measles (4%), HIV/AIDS (3%) and Injuries (3%). Preterm birth complications (10%), asphyxia at birth (8%) and sepsis and pneumonia (9%) account for about a third of the total mortality in under-fives. Thus, indicators that would evaluate progress in reducing the incidence of pneumonia, diarrhea, malaria and neonatal sepsis or pneumonia (accounting for a total of 54% of U5MR in 2000), would have provided very valuable information to policy design and program implementation, while also focusing attention on causes of significant mortality. Moreover, with under-nutrition an underlying cause of 53% of all deaths in children in this age group (Caulfield *et al*., 2004a; Caulfield *et al*., 2004b) it was not helpful to detach MDG1's indicator for reducing child underweight prevalence from the pursuit of child survival.

The choice of infant and child mortality rates as indicators for monitoring progress in the MDG4's sole target, while tautological, did fit with the global public health community's long-term effort not only to advance child survival, but also to refine the methods for measuring infant and child mortality. Much more problematic was the selection of measles immunization rate as a process indicator of mortality reduction. In 2000, measles was the cause of but 4% of U5MR, and unlike other vaccines which provide immunity only after three doses, a single dose of the measles vaccine is sufficient to protect children under one year old. As an indicator of health system effectiveness in combating child mortality, measles immunization is perhaps the least challenging of all to administer. When the WSC follow-up had been monitoring a much more complete, if complex, set of child health targets and indicators, why was measles immunization chosen as one of only three indicators of MDG4 when it did not really reflect the principle of measuring what matters?

The UN interagency working group that prepared the list of indicators for all the MDGs made its selection based on criteria of relevance, comparability, ease of collection/analysis and "well-established data sources… quantifiable and consistent over time" (UN, 2003, p.1). Immunization rates had been collected since the 1980s, so were a good candidate for long-term trends, yet previous global targets had called for children to be fully immunized against *all* vaccine-preventable illnesses, not just measles. Why the reductionism? Gareth Jones, the UNICEF Chief of Statistics who participated on the interagency task force responsible for selecting the indicators, explained that since measles is the only immuno-preventable disease that kills children, it was singled out to monitor reduction in child mortality. At the same time, he noted that monitoring measles was easy, compared to other childhood killers.[8] Robert Blake, Director of the Institute for International Programs of the John Hopkins Bloomberg School of Public Health, went so far as to say that selection of measles immunization as the single indicator of underlying mortality was "totally ridiculous" and reflected the influence of the vaccine/immunization program lobby rather than any sound epidemiological reason.[9]

Thus, although technical inter-agency Task Force which finalized the MDG4's target and indicators had a broad selection of tried and true measures for monitoring child-health and reducing child death, the three it chose were all about death, not health. Even the indicator of measles immunization coverage was selected because measles alone was a killer, and was specified only as a vaccination process to be monitored, not as an outcome to be obtained. Compared to the prescient WSC goals, the goal for child mortality reduction was monitored by a process indicator, divorced from structural indicators and unsupported by sub-goals for improving child health.

*Empirical changes in child mortality and its causes between 2000 and 2011*.

In the decade following the Millennium Declaration, the annual number child deaths plunged from 12 million to 6.9 million, and the global U5MR from 87/000 to 51/000. While well short of the target of reduction by two-thirds in child mortality rates, this represents a remarkable achievement (UNICEF, 2012a, p. 7). During the same period, the share of child deaths due to

[8] Interview with Gareth Jones, former UNICEF Chief of Statistics, 24 January 2013

[9] Interview with Prof. Robert Black, Director of the Institute for International Programs of the Johns Hopkins Bloomberg School of Public Health in Baltimore, Maryland. 31 January 2013

measles plummeted by three-quarters causing but 1 percent of mortality, the number of measles deaths globally decreased by 71 percent, and the number of new cases dropped 58 percent (WHO, 2013a)[10]. This might indicate the power of the MDG indicator in focusing attention on this child killer. However, overall progress in reducing deaths by measles is associated, to a considerable extent, with the increase in global immunization rates which occurred well before MDG4 was established: immunization rates had increased from 12 percent in 1980 to 72 percent in 1990, remained at 72 percent in 2000, and increased to 85 percent in 2011[11]. Thus, the greatest increase in immunization rates are undoubtedly linked to the campaigns of the 1980s, under the UCI 1990 initiative, and follow-up to the 1990 World Summit Declaration and Plan of Action[12]. Despite a significant drop in measles deaths in the first decade of the millennium, measles was and remains far from a leading cause of child mortality.

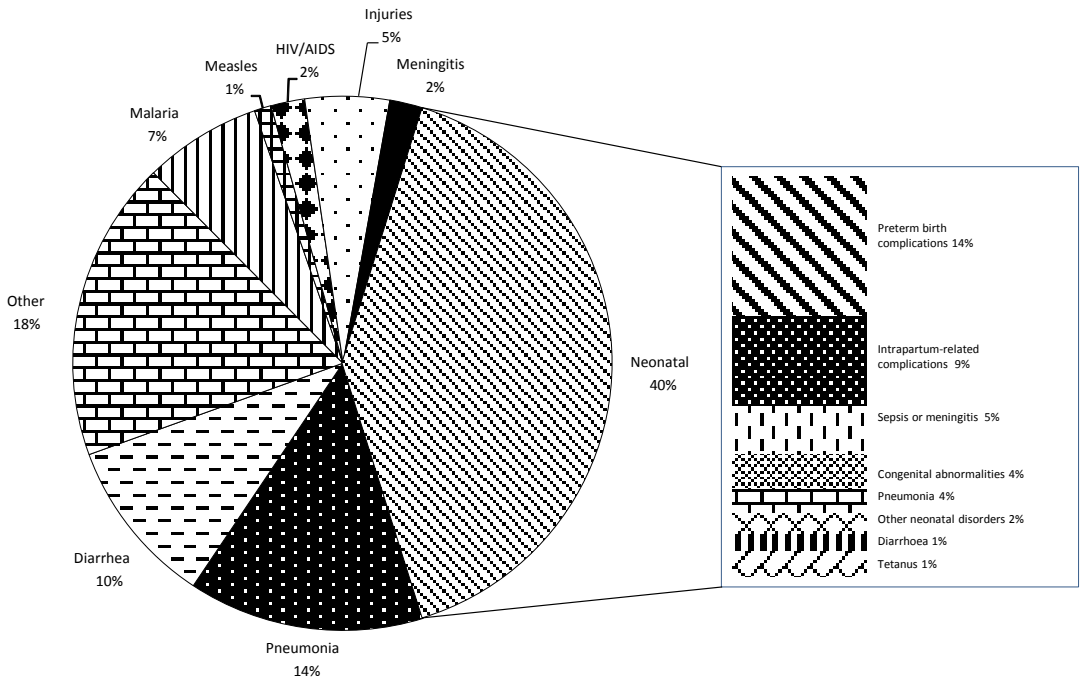
Globally, the leading causes of death among children under five in 2010 remained pneumonia (18%) and diarrhea (11%), with complications during birth (9%) and malaria (7%). The share of preterm birth complications increased from 10% in 2000 to 14% in 2010. Overall, the share of child deaths in the neonatal period (prior to one month of age) has increased to 40 percent. This reflects the major declines in the share of child deaths due to infectious diseases, particularly from diarrhea and measles and, to a lesser extent, AIDS. While pneumonia continues to claim the highest share of child deaths, the actual number of children dying from pneumonia decreased by more than 6 million since 2000 (UNICEF, 2012a, p. 16).

[10] The number of cases of measles has declined constantly since 1980 when the mortality rate for this illness for children under five was 7% of child mortality. Thus, the MDG indicator did not have a practical impact on which causes of child mortality were pursued, as a steady decrease had already commenced since 1980.

[11] WHO and UNICEF estimates (WHO, 2012b). In 1974, WHO founded the *Expanded Program on Immunization* as global immunization rates were about 5%. UNICEF joined the effort of vaccination and during the 1980s implemented the successful *Universal Childhood Immunization*. As a result, by 1990 80% of the world's children were being immunized with the six EPI vaccines -- tuberculosis, diphtheria, tetanus, pertussis, measles and polio.

[12] Nonetheless, in 2001 the American Red Cross, the United Nations Foundation, the U.S. Centers for Disease Control and Prevention, UNICEF and WHO founded the Measles Initiative, that has helped to raise measles vaccination coverage to 85% globally, and reduced measles deaths by 74%. This initiative was a logical continuation of the 1990/91 Children's Vaccine Initiative.

Figure 1: Global causes of childhood deaths in 2010




Source: Own elaboration with data from Liu, L. *et al*. (2012). Article made for the Child Health Epidemiology Reference Group of WHO and UNICEF.

Pneumonia, still responsible for almost one in five deaths and diarrhea, responsible for one in ten child deaths, are both diseases highly associated with poverty, poor environments, under-nutrition and a weak health system, and hence cannot be addressed, like measles, with a simple injection. Neonatal mortality is even harder to address as it calls for attention to both the mother's right to health and the child's. MDG 4, in failing to monitor the most significant causes of child mortality, did not drive global attention or resources towards the determinants of health sustaining the stubborn share of these complex diseases.

Veterans of the child survival revolution compensated for the irrelevance of the immunization indicator, by launching the *Countdown 2015* initiative to monitor a complete set of child survival indicators. However, this was a full five years into the Millennium decade. Hence, one must question whether the extraordinary 40 percent reduction of child mortality between 1990 and 2011 might have been greater, had MDG 4's indicators been fully aligned with the main causes of child death.

*Consequences of un-tethering child mortality targets from a human rights framework*

The framing of MDG 4 not only shrunk the previous decade's interrelated child survival and child health agenda, but un-tethered the goal from the Millennium Declaration, the CRC and human rights standards and principles. MDG 4 was set at a time the human rights-based approach to development was still evolving, yet it did not build upon the incipient efforts to embed human rights principles of earlier global agendas. Among the many weaknesses resulting from this un-tethering was that the global goal was the same for all countries, without room for national adaptation, and it was expressed as a an average with no concern for reducing disparities. These weaknesses had the practical effect of discriminating against the poorest countries and the poorest children.

*Inadmissibility of national adaptation of MDG 4.*

In sharp contrast to the UN's long-established practice encouraging national adaptation of global goals, neither the Millennium Declaration nor the MDG agenda called for tailoring the goals 'to the specific realities of each country in terms of phasing, priorities, standards and availability of resources'. Some have speculated that this reflects the MDGs' origins in a donor process, and donors' unwillingness to trust developing countries to set suitable goals. Whereas the WSC Plan of Action recognized that '… adaptation of the goals is of crucial importance to ensure their technical validity, logistical feasibility, financial affordability' and shrewdly observed that national adaptation was also crucial 'to secure political commitment and broad public support for their achievement'[13], pursuit of the MDGs offered no option for adaption in consideration of a

[13]The UN had long respected the right of member states to adapt global goals; in the 1980 *International Development Strategy for the UN's Third Development Decade* the resolution included in its para. 162 that "Each

country's starting point, availability and access to resources, or cultural, religious and social traditions.

While the fact that MDGs were set as 'one-size-fits-all' has been a frequent complaint from the beginning, less discussed is that this uniformity of ambition is to some extent a function of the MDG agenda's un-tethering from the Millennium Declaration 's human rights framework. Were MDG 4 to be pursued under a human rights approach, society's choices for prioritizing the sequencing of universal fulfillment of human rights would be in the hands of citizens participating in the establishment, and monitoring, of national benchmarks for measuring the progressive realization[14] of every child's right to survive; a two-thirds reduction in child mortality could be an appropriate benchmark for some countries, but certainly not for all. This rigid goal-setting indeed had practical consequences. Not only did it freeze 21st century development efforts in a 20th century model of central planning, it also distorted the measurement of progress: either a country was reducing its U5MR at a speed that was 'on-track' to reach the two-thirds target, or it was not. Yet individual situations are not so simple. In evaluating progress in U5MR reduction, it is often noted that the greatest burden of mortality is concentrated in South Asia and Sub-Saharan Africa, as confirmed in Table 2:

country ...will implement appropriate policies…within the framework of its development plans and….in accordance its cultural identity, socio-economic structure and stage of development"(UNICEF, 1990)

[14] In human rights treaties including the CRC, governments take on the obligation to realize economic, social and cultural rights progressively "to the maximum extent of available resources", (CRC Art. 4) an obligation that can only be met by taking into account rates of historical progress and availability of resources. The countries with the highest rates of child mortality are also those most in need of development assistance, the obligation for which was not specified in MDG8, which is devoid of targets.

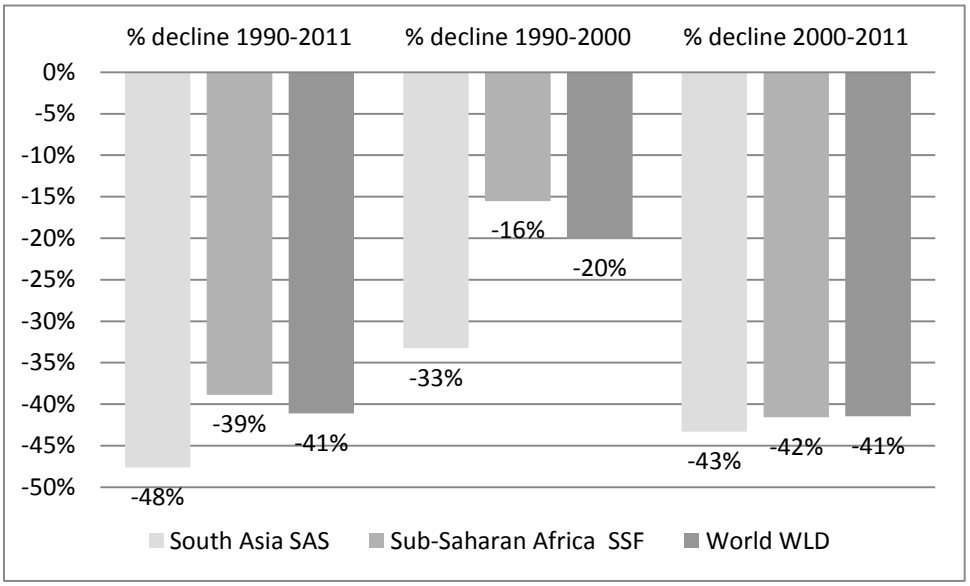
Table 2: Evolution of under-five mortality rate by regions, 1990-2011

| Under-five mortality rate (per 1,000 live births) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Region** | **1990** | **1995** | **2000** | **2005** | **2010** | **2011** | **Decline 1990-2011 (%)** | **Annual rate of reduction 1990-2011 (%)** | **Progress towards the MDG target 2015** |
| Sub-Saharan Africa | 178 | 170 | 154 | 133 | 112 | 109 | 39 | 2.3 | Insufficient progress |
| Eastern and Southern Africa | 162 | 155 | 135 | 112 | 88 | 84 | 48 | 3.1 | Insufficient progress |
| West and Central Africa | 197 | 190 | 175 | 155 | 135 | 132 | 33 | 1.9 | Insufficient progress |
| Middle East and North Africa | 72 | 61 | 52 | 44 | 37 | 36 | 50 | 3.3 | On track |
| South Asia | 119 | 104 | 89 | 75 | 64 | 62 | 48 | 3.1 | Insufficient progress |
| East Asia and Pacific | 55 | 49 | 39 | 29 | 22 | 20 | 63 | 4.7 | On track |
| Latin America and Caribbean | 53 | 43 | 34 | 26 | 22 | 19 | 64 | 4.8 | On track |
| CEE/CIS | 48 | 45 | 35 | 28 | 22 | 21 | 56 | 3.9 | On track |
| **World** | **87** | **82** | **73** | **63** | **53** | **51** | **41** | **2.5** | **Insufficient progress** |

Source: IGME, 2012.

However, both the rate of change and the absolute value of U5MR have varied significantly between regions, as the table makes clear. On face value, only two regions, East Asia and the Pacific and Latin America and the Caribbean, are 'on track' to reach the MDG 4 target. Yet their starting point was already well below the WSC target of 70/000, and in absolute values, these leading regions dropped their U5MR by 35/000 and 34/000, respectively. Sub-Saharan Africa, on the other hand, while consistently scolded for showing 'insufficient progress' (or worse, for being 'off-track' like some wayward teenager), dropped its regional rate of child mortality by 69/000, more than twice as much, in absolute terms, of the high-performing regions. In fact, of twenty high mortality countries, Sub-Saharan Africa is where most of the 21st century's sharpest accelerations in reducing under-five mortality have occurred (UNICEF, 2012a, p. 8).

Figure 2: Evolution in under-five mortality in the regions with the highest rates



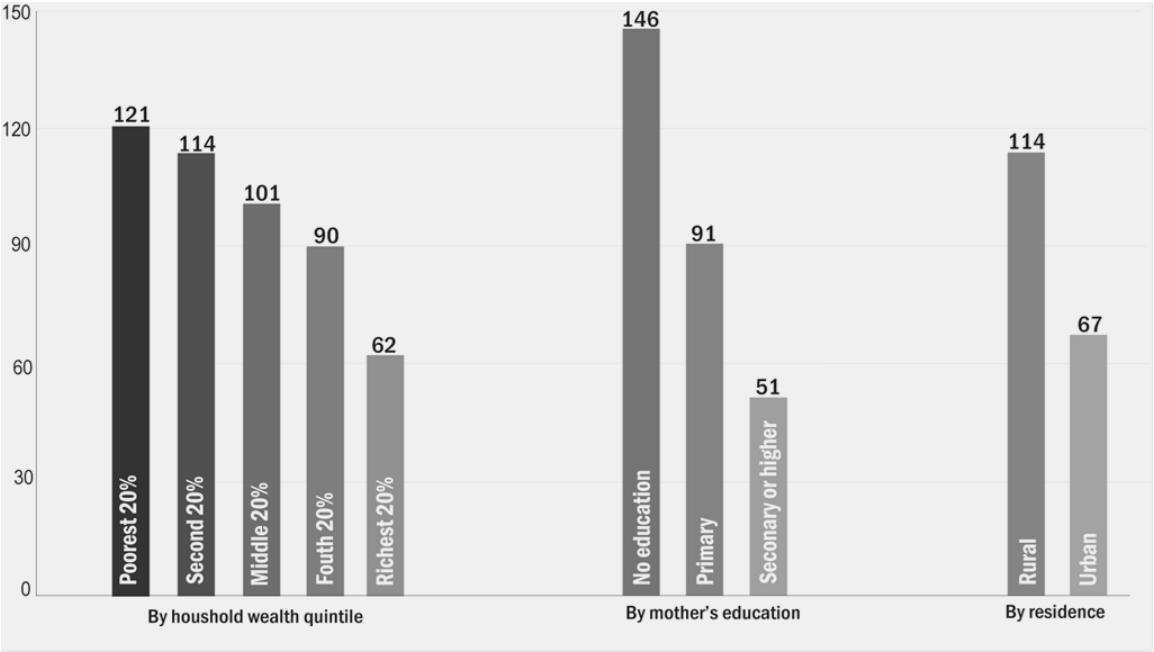

Source: Own elaboration with data from UNICEF (2012b).

When the global measurement of success takes no account of absolute change in child mortality, or of the speed of change, both political will and resource mobilization suffer. *De-facto* discrimination against the regions with the highest burden of child mortality has been an unintended consequence of MDG 4's method of measurement.

*Discriminating against the worst-off children.*

MDG 4's lack of attention to reducing disparities both between and within countries has resulted in another unintended consequence: that of leaving the poorest and most excluded children behind, in violation of the principle of equality and non-discrimination.

Figure 3: Under-five mortality and wealth, education and residence




Source: UNICEF (2012a, p. 10).

Figure 3 tells another story about MDG 4; just as there is an unequal burden of child death among regions and countries, so too is there unequal burden within countries. The inter-relationship between MDGs 1, 2, 3 and 4 determines who gets left behind: children of mothers with no education are three-times more likely to die before their fifth birthday than those with mothers who attended secondary school; the poorest children's risk of dying is twice that of the richest; likewise, rural children are at twice the risk of dying as compared to urban children. Digging deeper, we find that pursuing and monitoring MDG 4 as a global average with no regard for the principle of equality and non-discrimination distorts the meaning of 'on-track', the premier definition of MDG success. In their 2011 UNICEF working paper (Fukuda-Parr and Greenstein, 2011, p. 18), Fukuda-Parr/Greenstein demonstrate that, by taking into account historical rates of progressive realization, some countries which are considered to be 'on-track' for achieving the MDGs have actually *decelerated* the speed with which child mortality rates declined, compared to the decade before the establishment of the MDGs. These countries should

hardly be considered 'on-track' if their relative effort for child survival has declined.[15] On the other hand, the study showed some countries, which have more than doubled the rate of decline between the decade before and the decade after the MDGs, are deemed 'off-track' since they have not accelerated sufficiently to attain the global goal of two-thirds reduction.

In Turkey, a country which has led the world in U5MR reduction (declining 79% between 1990 and 2011) (UNICEF, 2012a, p. 10, 34-41), the poorest children are 2.6 times more likely to die than the richest. In Bangladesh, another MDG4 success story (67% decline), the poorest children are twice as likely to die than the richest.

In 2010, Save the Children published a study that analyzed the relative rate of improvement in survival for children in the poorest, compared to the richest quintiles of the population, in 32 countries for which data was available. By these measures, in only 7 countries was the rate of mortality reduction of children in the poorest quintiles higher than the richest. These seven countries made policy choices consistent with the principle of equality and non-discrimination, and took a stand for the survival of all children; moreover, there appears to be a correlation between accountability and equitable progress, since according to the 2008 Open Budget Index these countries scored 80 percent higher on their budget transparency (Save the Children, 2010, p. 27). In Zambia, for example, child mortality declined by 42 percent in the poorest quintile, twice as much as in the richest (19%); in Ghana the decline was 34 percent among the poorest children compared to 20 percent among the richest. On the other hand, in Rwanda, mortality for the poorest children *increased* by a shocking 46 percent (Save the Children, 2010, p. 15), and yet the MDG review of progress deems the country 'very likely' to achieve MDG 4, while Ghana, despite its equitable progress, is 'off-track' (UN, 2013b). Disaggregating statistics of progress, even by the single dimension of wealth quintile, can reveal a very different picture of MDG 4's progress, and demands renewed attention to the Millennium Declaration's values of solidarity and equality.

[15] This cannot be explained by the conventional wisdom that lower the U5MR the harder it is to achieve further change; the *A Promise Renewed* 2012 *Report*, documented that low mortality countries have in fact experienced continued reductions and as a group they have achieved an almost 70% decline in their overall under five mortality rate pp. 10-11.

The un-tethered framing of MDG 4 target as a global average had the unintended consequence of discriminating against the poorest countries and the poorest children and undermining the pursuit of social justice.

**MDG 4's impact on policy choices and resource allocation**

*Analysis of the global impact*

International aid to health has increased dramatically and continuously since 1990. Development assistance for health (DAH) was $5.7 billion in 1990s, $10.7 billion in 2000, and $28.1 billion in 2010 (IHME, 2012), its historic high[16]. Table 3 shows that all UN agencies and programs experienced a large increase in their health program budget during this period, especially UNICEF, whose total health budget increased 270 percent.

[16] Between 2000 and 2012 the value of this indicator increases by 163%.

Table 3: Development assistance for health by channel of assistance, 2000-2012

| Channel | 2000 | 2010 | 2011** | 2012** | % Increase 2000-12 |
|---|---|---|---|---|---|
| **Bilateral development agencies** | | | | | |
| United States | 1,005.15 | 7,119.53 | 7,193.05 | 6,955.27 | **592%** |
| United Kingdom | 567.47 | 1,168.61 | 1,221.00 | 1,248.59 | **120%** |
| Germany | 194.17 | 434.46 | 407.11 | 370.20 | **91%** |
| France | 202.81 | 480.21 | 405.11 | 352.29 | **74%** |
| Canada | 83.70 | 494.85 | 401.66 | 378.69 | **352%** |
| Australia | 161.87 | 339.06 | 376.59 | 407.04 | **151%** |
| Other bilaterals | 1,244.87 | 1,973.01 | 2,010.48 | 1,769.64 | **42%** |
| **United Nations** | | | | | |
| Joint United Nations Programme on HIV/AIDS (UNAIDS) | 132.87 | 293.28 | 289.08 | 272.53 | **105%** |
| United Nations Population Fund (UNFPA) | 383.88 | 823.80 | 812.80 | 970.21 | **153%** |
| United Nations Children's Fund (UNICEF) | 323.16 | 847.32 | 1,093.61 | 1,197.11 | **270%** |
| World Health Organization (WHO) | 1,256.97 | 2,120.35 | 2,093.12 | 2,051.14 | **63%** |
| Pan American Health Organization (PAHO) | 287.33 | 423.12 | 414.59 | 371.13 | **29%** |
| **European Commission (EC)[1]** | 366.20 | 359.27 | 389.22 | 355.75 | **-3%** |
| **Public-private partnerships** | | | | | |
| GAVI Alliance (GAVI) | 2.80 | 1,068.00 | 1,237.18 | 1,755.68 | **62542%** |
| Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) | -- | 3,292.85 | 2,733.47 | 3,069.94 | |
| **Bill & Melinda Gates Foundation (BMGF)** | 373.79 | 1,123.28 | 1,152.04 | 898.77 | **140%** |
| **Other foundations [2]** | 347.15 | 454.15 | 484.76 | 510.63 | **47%** |
| **Non-governmental organizations (NGOs) [2]** | 1,314.64 | 2,960.04 | 2,631.10 | 2,744.27 | **109%** |
| **World Bank** | | | | | |
| International Bank for Reconstruction and Development (IBRD) | 889.44 | 1,225.43 | 1,053.97 | 1,281.87 | **44%** |
| International Development Association (IDA) | 891.42 | 822.33 | 750.45 | 912.24 | **2%** |
| **Regional development banks** | | | | | |
| African Development Bank (AfDB) | 45.44 | 117.78 | 113.73 | 114.58 | **152%** |
| Asian Development Bank (ADB) | 385.32 | 85.37 | 75.83 | 53.56 | **-86%** |
| Inter-American Development Bank (IDB) | 220.55 | 133.70 | 93.30 | 66.04 | **-70%** |
| **Total** | **10,681.02** | **28,159.76** | **27,433.25** | **28,107.15** | **163%** |

**: Preliminary estimates based on information from channels

Source: IHME DAH Database 2012

Notes: In millions US$, 2010. Development assistance for health (DAH) includes both financial and in-kind contributions for activities aimed at improving health in low- and middle-income countries.

This table disaggregates DAH by the institutional channel through which DAH flowed to low- and middle-income countries. Dashes indicate inapplicable.

1 Includes funds from the European Development Fund and the European Commission budget.

2 Only includes organizations incorporated in the United States.

International aid to health programs during the last decade are characterized not only by more funding, but by new actors (key partners such as the Bill and Melinda Gates Foundation) and a significant increase in collaborative action to address major global health concerns by the WHO, Global Alliance for Vaccines and Immunization (GAVI), World Bank, UNICEF, and Joint United Nations Programme on HIV/AIDS (UNAIDS). A look at the budget by health focus area shows increases in the decade under analysis for all types of health programs. HIV/AIDS, health

sector support and malaria occupy the first positions in the ranking. All these sub-sectors have an impact, direct or indirect, in child mortality, but programs on maternal, newborn and child health could be considered to have the most direct impact on achieving MDG 4. Development assistance to this sub-sector increases by 78 percent in the decade of the 2000s, a significant increase in absolute terms, but a fraction of the increase to other subsectors in relative terms.

Table 4: Development assistance for health, by health focus area, 2000-2010

| Year | HIV/AIDS | Maternal, Newborn, and Child Health | Malaria | Health sector support | Tuberculosis | Noncommunicable Diseases | Other | Unallocable | Total |
|---|---|---|---|---|---|---|---|---|---|
| 2000 | 735.26 | 2,899.21 | 229.52 | 145.37 | 152.55 | 112.22 | 3,293.34 | 3,113.54 | **10,681.02** |
| 2001 | 889.03 | 3,231.82 | 218.43 | 43.14 | 186.03 | 91.79 | 3,403.56 | 2,753.27 | **10,817.05** |
| 2002 | 1,391.31 | 2,756.59 | 205.21 | 145.90 | 215.21 | 111.70 | 4,053.24 | 3,560.97 | **12,440.11** |
| 2003 | 1,812.39 | 2,987.20 | 259.38 | 159.76 | 269.36 | 98.37 | 4,713.28 | 2,958.12 | **13,257.86** |
| 2004 | 2,460.94 | 3,245.76 | 465.31 | 269.73 | 432.55 | 77.00 | 4,735.82 | 2,915.21 | **14,602.32** |
| 2005 | 3,146.27 | 3,740.66 | 809.36 | 501.04 | 467.91 | 86.28 | 5,157.90 | 2,903.93 | **16,813.36** |
| 2006 | 4,066.41 | 3,274.72 | 756.40 | 904.94 | 583.21 | 106.63 | 5,193.83 | 3,525.46 | **18,411.58** |
| 2007 | 5,137.17 | 4,319.67 | 847.46 | 1,028.89 | 730.50 | 151.95 | 4,940.84 | 4,120.41 | **21,276.90** |
| 2008 | 6,248.21 | 4,415.50 | 1,273.81 | 1,161.30 | 897.36 | 160.43 | 5,439.12 | 5,128.72 | **24,724.44** |
| 2009 | 6,572.18 | 4,748.34 | 1,938.35 | 1,211.33 | 962.48 | 195.13 | 4,962.13 | 4,855.14 | **25,445.08** |
| 2010 | 6,757.36 | 5,166.81 | 1,856.67 | 1,180.90 | 1,095.13 | 185.14 | 5,945.69 | 5,972.06 | **28,159.76** |
| **% increase 2000-2010** | **819%** | **78%** | **709%** | **712%** | **618%** | **65%** | **81%** | **92%** | **164%** |

Sources: IHME DAH Database 2012 and DAH Database (Country and Regional Recipient Level) 2012
Notes: In millions US$, 2010. Development assistance for health (DAH) includes both financial and in-kind contributions for activities aimed at improving health in low- and middle-income countries. This table dissagregates financial DAH earmarked for HIV/AIDS, maternal, newborn, and child health, malaria, health sector support, tuberculosis, and noncommunicable diseases. We were able to allocate flows from the following channels of assistance by their health focus areas: bilateral development agencies, World Bank (IDA and IBRD), regional development banks, GFATM, GAVI, WHO, UNICEF, UNAIDS, UNFPA, and BMGF. Contributions from remaining channels are shown as unallocable by disease.

Given that neonatal mortality accounted for 40 percent of U5MR in 2010 it is significant that the donor community responded with a nineteen-fold increase in funding aimed at benefiting newborns, directly and indirectly. Exact figures on aid to prevent newborn deaths cannot be obtained due to data limitations. Nevertheless, it is clear that preventing deaths of children in their first month of life has received considerable attention from donors and national governments alike (Pitt *et al.*, 2002).

However, increases in aid budgets for health, or indeed for child health, are not sufficient to prove that donor organizations have been motivated by MDG 4. Reviewing the mission, strategies and goals of internationally-supported child health programs sheds light on this central question. As a general point, it is worth noting that, in a study of policy statements by one multilateral and 20 bilateral donors, child survival was found to be among most consistently

neglected MDGs (Fukuda-Parr, 2010, p. 32). Our own analysis of the mission, goals and programs of the major donors in international health aid since 2000[17] shows that, although these organizations were highly committed to reducing child mortality, their stated motivation was not MDG 4's achievement, but rather the long-held global priority for child survival and underlying child health targets, supported by a coalition of actors who had worked together over many years. Although the global consensus around MDG 4 may have strengthened this coalition (in terms of budget and number of partners) and revived attention to reducing child mortality, there is scant evidence that achieving MDG 4 was a driving motivator for the dramatic increase in resources devoted to child survival in the 21st century, at least not until quite late in the first decade. This will be examined further in later sections of this paper.

*National-level impact*

When considering national budgets, domestic health expenditures have increased over time in developing countries, and some studies show that there is a direct correspondence between per capita increase of government expenditure on health and a reduction in U5MR. A 127-country meta-study (Bokhari *et al*., 2007) showed that a 10 percent increase in government expenditure yielded a reduction in child mortality of between 2.5 and 4 percent. According to the Institute for Health Metrics and Evaluation, domestic health expenditure grew at a rate of 5 percent between 2000 and 2003 and 9 percent from 2003 to 2006 (IHME, 2012, p. 40). Table 5 compares the changes in total health expenditures between 2000 and 2011 of the most and least successful countries in reducing U5MR, as well as of the countries with the highest number of under-five child deaths.

[17] For instance, despite its active and sustained role in preventing child mortality, USAID did not referred to the MDGs in its aid allocation until 2010. The MDGs do not appear in the mission or strategy of GAVI, although it recognizes its role in helping achieve the MDGs immunization and other services to women and children. The Gates Foundation has been a major funder of child health and vaccine programs, including of research into neonatal mortality, yet a review of its annual reports reveals not a single mention of the MDGs.

Table 5: Total Health Expenditure (THE) as a percentage of Gross Domestic Product (GDP)

| Total Health Expenditure as a percentage of Gross Domestic Product | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Successful countries in reducing mortality | 2000 | 2011 | Variation 2000-2011 | Highest-mortality countries in 2011 | 2000 | 2011 | Variation 2000-2011 | Countries that account for half of U5M in 2011 | 2000 | 2011 | Variation 2000-2011 |
| Liberia | 5.91 | 19.48 | 230% | Somalia | 2.44 | NA | - | Democratic Republic of the Congo | 4.74 | 8.55 | 80% |
| Serbia | 7.42 | 10.43 | 41% | Democratic Republic of Congo | 4.74 | 8.55 | 80% | Nigeria | 4.56 | 5.32 | 17% |
| Bangladesh | 2.82 | 3.72 | 32% | Mali | 6.29 | 6.81 | 8% | China | 4.62 | 5.16 | 12% |
| Brazil | 7.16 | 8.90 | 24% | Sierra Leone | 17.51 | 18.84 | 8% | India | 4.27 | 3.87 | -9% |
| Mongolia | 4.66 | 5.26 | 13% | Chad | 6.28 | 4.28 | -32% | Pakistan | 3.03 | 2.51 | -17% |
| Portugal | 9.30 | 10.36 | 11% | | | | | | | | |
| Mozambique | 6.16 | 6.59 | 7% | | | | | | | | |
| Oman | 3.07 | 2.34 | -24% | | | | | | | | |

Source: WHO, Global Expenditure database (accessed March 22, 2013)

The evolution of total expenditure on health (THE)[18], increases for most countries in all 3 categories included in Table 3, but there is really very little relationship between the change in THE during the Millennium decade and the progress in meeting MDG4[19]. The contrast is most apparent for the DRC, which increased its THE by 80 percent while realizing a meager 8 percent decline in U5MR (from 181/000 to 168/000) and for Oman, which decreased its THE by 24 percent (from 48/000 to 9/000) while also decreasing U5MR by 82 percent (UNICEF, 2012a, p. 34, 36). Thus THE may not be a very useful indicator for analyzing policy changes aimed at increasing child survival and/or meeting MDG 4[20].

However, even where there is some evidence that mortality reductions may be related to increases in national budgets, are these increases aimed at achieving MDG 4? There is not

[18]THE includes external resources on health which declined for Chad, Nigeria and Mongolia since 2000. Republic Democratic of Congo, Mozambique, Liberia (with an increase of external resources on health as a percentage of THE from 10 to 55 explaining to a large extent the large increase in THE as percentage of the GDP), Mali and Sierra Leona had large increases in external aid. The rest of the countries had marginal (less than 1%) or no declines of external aid.

[19] The best indicator to analyze the effect of the MDGs at the national level would be health expenditure on child health. However, only recently the WHO has created a methodology that will allow the comparison between countries of key statistics from child health (WHO, 2011).

[20] An obvious variable related to decreasing child mortality is the percentage of births attended by skilled health personnel. However, it does not present increases for our cases of success since they already had percentages close to 100%. The only country with a significant increase in this indicator is Mozambique that had 25% of births attended by skilled health personnel in 2003 and increased to 55% in 2008. Liberia, on the other hand shows a decrease from 51% in 2000 to 39% in 2007 (WHO, 2013b).

conclusive evidence pointing in this direction. Countries with better child survival rates have, to a significant extent, referenced *A World Fit for Children* (WFC) in their strategic plan for children, and do not mention the MDGs either in their budget allocations or in their official reports to the CRC Committee. Some countries though, make a specific reference to the MDGs in their official documents. For example Liberia states, "As a step towards building a strong foundation for attaining the 2015 international development targets of the Millennium Summit goals, we resolve to achieve the unmet goals and objectives (of the World Summit for Children) (UN, 2009, p. 8). A review of the totality of Committee on the Rights of the Child's concluding observations and recommendations (CO&R) between 2000 and 2012 reveals that the MDGs were referenced only 26 times, almost always together with the goals of the World Fit for Children; these latter goals were referenced in the CO&R a total of 107 times during the same period (UNOHCHR, 2013). Thus, for States Parties to the CRC, direct references to the MDGs appear dependent on the achievement of the agreements and Plans of Action derived from the WSC and its follow-up the 2002 Special Session.

The limited pull of MDG 4 as a rational for investing in child health can also be seen in Poverty Reduction Strategy Papers (PRSPs) which, during most of the millennium decade, the World Bank negotiated with developing countries as a pre-requisite for debt relief, but also as a framework for coordinated international support to national priorities. The PRSPs should thus have been expected to reflect the MDGs. However, in the aforementioned desk study, it was found that of 22 PRSPs, all but four 'emphatically state commitment to the MDGs as a principle', yet PRSP support to individual goals, targets and indicators were highly variable. Most PRSPs 'appear to have applied MDG targets somewhat mechanistically, without adaptation'. Child survival was often conflated with health in general, and mortality reduction goals set above the MDG 4 target, as well as historical trends in some 61 percent of cases, and below the targets and trends in 33 percent of cases (Fukuda-Parr, 2010, p. 30, 31).

While this is a very incomplete analysis of the role of MDG 4 in driving national budget and policy change, subject to enormous limitations in data availability, it does seem to indicate that the connection to the MDG is at best rhetorical for countries both successful and unsuccessful in meeting the child mortality target.

**Normative consequences of MDG 4 and post-2002 global policy processes**

*Validating an established ethical norm*

The protection of children as vulnerable members of society fist emerged with the pioneering work of Eglantyne Jebb, whose 1923 Declaration of the Rights of the Child, established basic norms for child survival and development[21]. By the 2000 Millennium Summit, all but two countries had ratified the CRC, and assumed a specific obligation to protect 'every child's inherent right to life'. Moreover, as discussed earlier, the reduction of child mortality had been a development goal, particularly for actors in the international health field, for at least a quarter of a century prior to the establishment of MDG 4. Given the depth and the breadth of both legal and ethical norms to protect the child's right to survive, and the long history of the development goals to reduce child mortality, MDG 4 validated and reinforced an established norm, and arguably gave child survival new impetus in the global community, but did not establish a new norm.

*Mobilization for the achievement of MDG4, 2002-2013*

In 2002, the World Fit for Children agenda attracted the energy of governments, NGOs and youth organizations, but its very broad scope and its foundation in human rights principles and the indivisible rights of the child did not attract the attention of the child survival alliances, which had been far more active in following up the WSC agenda. Indeed, WFC's Plan of Action competed with the MDGs and, based on reports to the CRC Committee, appeared to garner more support of developing country governments and citizens alike. By 2006, fifty governments had prepared a national WFC Plan of Action and 120 had reported on their progress in meeting WFC goals. At the same time, UNICEF, which had spearheaded the global effort to achieve universal child immunization in the 1980s and the WSC plan of Action in the 1990s, had under Grant's successor, Carol Bellamy, developed a much broader agenda for the survival and development of children. The organization's mission statement had been changed in 1996, such that "UNICEF is guided by the Convention on the Rights of the Child and strives to establish children's rights as

[21] The Declaration of the Rights of the Child was drafted by Jebb in 1923, and adopted by the League of Nations as the Declaration of Geneva, in 1924.

enduring ethical principles and international standards of behavior towards children". UNICEF country representatives and offices now worked in many new sectors needed for realizing the rights of the child in a holistic manner, and pursuing the wide agenda agreed to at the UN's Special Session on Children of which child survival was only a part. This was sharply different from the field offices' focus in the 1980s and 1990s. This left the historic child survival coalition without a champion – at least not anything close to UNICEF's advocacy and programme reach. The coalition's bitterness burst into the open in 2003, in an editorial published in *The Lancet,* which stated:

> "It is widely, if regrettably, accepted that UNICEF has lost its way during [Executive Director] Carol Bellamy's long term of office [1995-2005]…she has failed to address the essential health needs of children. It was left to independent child health researchers and advocates, driven by intense frustration at Bellamy's unwillingness to engage with child survival, to draw attention to UNICEF's pervasive neglect of its central mission...UNICEF clearly has a pivotal role to lead the world's efforts to make children a global priority. Under Bellamy's leadership, UNICEF is presently in a poor position to do so. Her distinctive focus is to advocate for the rights of children…but the language of rights means little to a child stillborn, an infant dying in pain from pneumonia or a child desiccated by famine." (Horton, 2004)

The denigration of child rights as an abstract legal concept with no practical value to the millions of children dying daily was common in the child health community of 'independent child health researchers and advocates', and would remain so for several years to come. As a result, the global public health community failed to grasp the significance of applying the principle of equality and non-discrimination to efforts for reducing child mortality and accelerating achievement of MDG 4.

In an attempt to ignite the global community's attention and resources for a returned focus on child survival, in 2003, *The Lancet* ran a series of articles by distinguished public health experts,

led by Dr. Robert Black (Black, 2003; Jones, 2003). The series[22] sought to call the UN agencies to task by highlighting evidence that progress in reducing child mortality had slowed and in some cases reversed, that the causes of child mortality were inter-related with each other and with maternal mortality, and that several causes could be addressed with single interventions. In addition to presenting evidence on the slowdown in the reduction of child mortality, *The Lancet* 2003 series aimed to make child survival an international health priority once again, and attract the resources needed to accelerate the reduction of child mortality.

The editorial that introduced the series made no mention of MDG 4 and it was evident from the scarce mention of MDG 4 in the articles, that the child health coalition that had been working to reduce child mortality for decades[23] was not primarily motivated by the MDG. However, the coalition was happy to use MDG 4 as a rhetorical device to drive its long-term agenda.

A significant result of this *Lancet* series was the re-energizing of child survival partnerships, some of which had their beginnings in the days of the child survival revolution. In late 2004, the Child Survival Partnership was created to coordinate action and consistent approaches to reduce child mortality. Its members included WHO, the World Bank, the Gates Foundation, US Agency for International Development, the Canadian Agency for International Development and UNICEF. In 2005, momentum for consolidated action increased, with the creation of the Partnership for Maternal, Newborn and Child Health (PMNCH), an alliance which merged the world's three leading maternal, newborn and child health alliances, joining partners from governments, the World Bank, UN agencies, NGOs, academia and civil society 'from all continents' for a call to action "…to leverage and commit the required resources …to achieve MDGs 4 and 5", exhorting "Countries …[to] orient their national and sub-national development plans and budgets to fully achieve the maternal and child health MDGs by 2015" (PMNCH, 2005). PMNCH was created to counteract the fragmented and vertical approaches to both MDG 4 and MDG 5, and aimed to establish a 'continuum of care' that would integrate women's and

[22] The 2003 *Lancet* series was the product of yet another Bellagio Conference, which gathered long-term partners from the Child Health Epidemiology Research Group, researchers in the Multi-Country Evaluation of Integrated Management of Childhood Illness, and the WHO/World Bank/UNICEF Working Group on Child Health and Poverty Editorial.

[23] Dr. Robert Black confirmed that in the first half of the decade the child survival coalition worked to revive its long-term agenda, and did not focus on MDGs 4 and 5 for several years. Interview of 31 January 2013.

children's health across the life cycle. At this point, almost five years from the Millennium Declaration which had set the target of two-thirds reduction in child mortality, MDG 4 became the central goal around which the child survival coalition mobilized.

The *Lancet* series, which had grown out of the Bellagio Group first established in the 1980s, catalyzed one of the most important efforts for the achievement of MDG 4: *Countdown 2015,* which brings together scientists, policy makers, activists and program personnel to review the data on the causes and outcomes for child and newborn survival in the highest-mortality countries. The *Countdown* reports aim "to share new evidence and experience, to take stock of progress in preventing child deaths, to hold international and national level institutions accountable and …to propose new action" (UNICEF, 2005, p.11). The title of this new effort is indisputably linked with achieving MDG 4 (and later MDG 5), yet, despite this, the very first *Countdown 2015* report reflected the deep connection it had not with the MDGs, but with the more extensive set WSC goals.

> "Countdown indicators and measurement approaches build on work that started in the 1990s in the context of monitoring progress toward the World Summit for Children goals.…The indicators for MDG-4 on child survival are infant and under-five mortality rates and measles immunization coverage. However, a wider range of indicators will be required to adequately track progress…The framework for this indicator discussion was the set of prevention and treatment interventions outlined in the 2003 Lancet series on child survival"(UNICEF, 2005, p. 12-14)

While cloaking its purpose in the MDGs, The *Countdown* initiative was very explicit in recognizing that the MDG indicator of measles immunization was not up to the task and that a more comprehensive indicator set, representative of the interconnected causes of child mortality, was needed. The list of 23 priority indicators selected monitored coverage of (1) nutrition interventions including breastfeeding; (2) vaccination; (3) other prevention interventions; (4) case management of illness; and (5) newborn health. As such, the *Countdown* indicators reversed the Millennium's narrowing of the WSC agenda, and to some extent restored the severed relationships between MDG targets and child mortality by including in the priority list several indicators already being monitored under MDG 1, MDG 6 and MDG7. Led by the decades-old

Bellagio group, the global coalition of child-survival partners repossessed MDG 4, extending indicators to include the constellation of child health interventions.

Thus, the 2003 Lancet Child Survival series catalyzed the pent-up energy of veterans of the Child Survival Revolution and drew some significant new energy into global efforts to reduce child mortality, with MDG 4 as a useful umbrella. Still, although the *Countdown* and the formation of PMNCH corrected some of the MDG 4's shortcomings, these efforts did little to tie child-survival back onto a human rights framework. Of note, however, is that in the inaugural report, *Countdown 2015* presented data on the proportion of children under-five receiving six or more child survival interventions, for the poorest and least poor quintiles of the population, and committed to continue doing so for all countries where such data was available (UNICEF, 2005, p. 29-30). This data served to draw attention to the *de-facto* discrimination that left the most vulnerable children and women behind.

Evidence of inequalities in the health and survival of children in low and middle income countries "had been absent in the global medical literature before 2000…as there was no need to account for sub-national inequalities when strategies were designed for scaling up" (Victora *et al.*, 2012). There was an assumption that all children would benefit equally from a country's effort to reduce U5MR, combined with a utilitarian attitude by which scarce resources were to be used to do the greatest good for the greatest number, which often did not include the excluded and hard to reach children. Yet the inequalities in progress were becoming impossible to ignore. In its September 2010 *Progress for Children Report,* UNICEF presented evidence that even in countries where child mortality had decreased by 10 percent or more, inequality in U5MR between children from the poorest and the richest households either increased (sometimes by more than 10%) or stayed the same (UNICEF, 2010, p. 23).

In 2010, UNICEF's new Executive Director, Anthony Lake, directed his staff to model the trade-off between equity (reaching the poorest) and efficiency (reaching the most children). The model, seemed to demonstrate that per $1 million invested "…prioritizing services for the poorest and most marginalized…could result in sharper decreases in child mortality" whereby approximately 97 children's lives could be saved in the most deprived populations areas versus 61 in the least deprived (Carrera *et al.*, 2012). While the 'equity model' could be based on

utilitarian instead of human rights principles, the effect is to bring more services if not more power to excluded populations.

That same year, the PMNCH supported the UN Secretary General to consult with its constituency to reach a consensus that more momentum was essential, if the world community was to have any hope of achieving MDG 4 and MDG 5. At the occasion of the September 2010 United Nations' MDG Review, Ban Ki-moon launched *The Global Strategy for Women's and Children's Health* (The Global Strategy), it recognized many of the unintended consequences that flowed from MDG 4's reductive agenda: that the goals had to be tackled by country-led, not global, plans; that child health (and survival) required delivery of an integrated set of interventions that tackled pneumonia and diarrhea (not merely measles), and demanded community engagement, political leadership and accountability at all levels. The Global Strategy was not explicit in demanding that inequalities in child survival end, but, implicit in its complex agenda, was a recognition that MDG 4's average targets and simple indicators had failed to mobilize the technical and financial resources needed to reduce mortality by two-thirds for all the world's populations.

The 2010 Global Strategy spawned the Commission on Information and Accountability for Women's and Children's Health ("the Commission"), whose 2011 report made ten recommendations (Commission on Information and Accountability, 2011, p. 4, 5) to accelerate progress towards 2015 goals, a handful of which were steps towards a more robust use of human rights principles in child health programs, including:

> "7. Countries have established national accountability mechanisms that are transparent, inclusive of stakeholders and recommend action as necessary;
>
> 8. All stakeholders are publicly sharing information on commitments, resources provided and results achieved annually at both national and international levels."

The Commission also established an independent Expert Review Group to report regularly to the UN Secretary-General on progress of the implementation of the recommendations, and established core indicators by which progress would be monitored. With the Commission and the Expert Review Group, we see an attempt to better center the pursuit of the MDGs in the human

rights principles undergirding the Millennium Declaration; these recommendations help focus the global health community not just on goals and targets, but on processes of transparency and accountability that must be part of the programs aimed at achieving not just the child mortality goals, but the child health and well-being, that necessarily must precede and guarantee survival. As such they represent an important step towards a human rights-based approach to child survival. In 2012, the independent Expert Review Group issued its first report, which acknowledged that 'by wealth quintile, the available evidence shows that the poorest groups are largely excluded from any benefits …[of] efforts to deliver the Global Strategy' (ERG, 2012 p.3), and that there needed to be more inter-sectorality in the pursuit of MDGs which influence women's and children's health 'such as poverty, education, gender inequality, water and sanitation, urban environments and access to affordable medicines' (ERG, 2012 p.5). Such observations indicate a further understanding of the importance of human rights principles of non-discrimination and indivisibility to the child's right to health and to life; indeed, the report acknowledges 'that human-rights-based approaches have a crucial but neglected part to play in the delivery of the Global Strategy' (ERG, 2012, p.5). In 2013, the Independent Expert Review Group is deepening its understanding of a human rights-based approach to the implementation of the Commission's recommendations in five countries. The Committee on the Rights of the Child has issued an important General Comment on the child's right to health, which can guide countries both as they push towards the 2015 target for U5MR, and as they contribute to the development of the post-2015 agenda.

*The Questionable Power of MDG 4*

How much of the 21st Century's mobilization for the reduction of child mortality occurred as a consequence of the Millennium Agenda and MDG 4's target, and how much as a consequence of the Bellagio child survival coalition regrouping its energies around the *Lancet* series launched in 2003, and the *Countdown 2015* initiative which followed? Answering this question with a degree of scientific certainty is impossible, given the number and diversity of confounding factors. As was analyzed in the previous section, while total funding for child health and survival increased several-fold, the review of donors' policy statements indicate scant mention of MDG 4 as a motivator; the review of a sample of total health expenditure by countries, both successful and unsuccessful in being 'on track', reveals no particular association between increased investment

and MDG 4 results. Rather, implementation plans seem to be more related to the World Fit for Children Plan of Action than the Millennium Agenda. Hence, MDG 4 demonstrated questionable power to influence global and national programs and budgets. Similarly, it seems to have had an uncertain influence on the partnerships and alliances that have mobilized so dramatically and effectively in favor of child survival over the past decade. These alliances have very consciously focused not on child death, but on child health, the foundation of child survival, and were quick to establish, with *Countdown 2015,* a set of indicators that would monitor the causes of child mortality in a far more comprehensive manner than MDG 4's indicator of measles immunization coverage. This expanded set of indicators has provided considerably more information on trends in major fatal diseases. Yet 2005 can be considered a pivotal year, when MDG 4, through the PMNCH and the *Countdown,* became the ostensible if imperfect purpose driving the child survival alliance. This powerful coalition mobilized to reform the stovepipe pursuit of MDGs, which were all inter-related in their potential to advance the survival of both children and mothers, as is demonstrated by the formation of the PMNCH and, later, the UN Secretary General's Global Strategy. Indeed, this dynamic coalition has been able to draw attention to the shortcomings of MDG 4, as described at the outset of this paper, and begin to address them. Through the Commission and then the Independent Expert Review Group on Information and Accountability, a human rights approach to the pursuit of MDGs 4 and 5 has been deemed essential, which provides some evidence that the implementation of the post-2015 agenda may pay careful attention to equality and non-discrimination, the indivisibility of rights, public participation, and accountability at global, national and local levels. Indeed the outcome of the Global Thematic Consultation on Health in the Post-2015 Development Agenda concluded that '…. not everything about the MDGs was perfect. Health is a human right and about more than disease. Goals need to be relevant to all countries and have much greater focus on equity within nations, disaggregation of data and setting of targets for closing gaps' (UN, 2013b).

At the same time as the public health community is recognizing the benefits of a human rights approach to child health and survival, the human rights community is providing guidance in how that can be done. In early 2013, the CRC Committee issued its general comment, and the Human Rights Council not only spent a full day discussing the child's right to the highest attainable standard of health, but in its resolution A/HRC/22/L.22 Rev. 2, affirmed "the importance of

applying a human rights-based approach to reducing and eliminating preventable maternal and child mortality and morbidity" and invited "the World Health Organization, to prepare a study on mortality of children under 5 years of age as a human rights concern." Preparations for the post-2015 agenda provide a perfect opportunity to cement the converging public health and human rights approaches to child mortality. In the following section, we provide suggestions for framing the targets and indicators of a child's right to survival and to the highest attainable standard of health, building on this analysis of the power of numbers in MDG 4.

## Measuring what matters for child survival in the Post-2015 Development Agenda

### *Unintended consequences of MDG 4*

This paper has documented some of the unintended consequences flowing from the framing of MDG 4, its target and indicators in a limited manner that:

1) Was set by an elite technical process divorced from a coalition of veterans of the child survival revolution, which allowed for neither political nor societal participation, slowing the pursuit of MDG 4 in the first years of the 21st Century;
2) Was a 'one-size-fits-all' goal with no national adaptation and taking no account of a country's starting point or resources, leading to a distortion in measuring 'success', particularly for Sub-Saharan Africa, where the absolute decrease in U5MR often exceeded that of countries deemed 'on-track';
3) Severed the relationship between child survival and child health, by singling out measles, the simplest, but smallest share of mortality to monitor and failing to monitor indicators of inter-related causes that made up the greatest share of child mortality.
4) Was set as a global average, which did not help to decrease inequities in health, discriminated against the poorest countries as well the poorest children, who in 2012, were half as likely to survive as the richest children
5) Failed to incorporate the Millennium Declaration's human rights framework which not only contributed to leaving the poorest behind, but to lack of popular participation in setting and monitoring benchmarks of progressive realization, and a lack of accountability or legal remedy.

*Learning from the experience of MDG 4*

Over the past decade, some of these unintended consequences have come to be addressed; most notably the process for developing the Post-2015 Development Agenda is dramatically more open, extensive and participatory. The UN has organized global thematic consultations on eleven topics, including on health and on inequalities, and opened consultation websites to the global public. As follow-up to the Rio+20 Outcome Document, *The Future We Want*, global consultations are taking place for prepare a set of Sustainable Development Goals (SDGs), building on the MDGs. This time around, the global development goals and targets will be proposed under a highly participatory process with diverse stakeholders across the world. With such a ferment of global preparatory activity, the final post-2015 goals cannot be selected by a small group of UN technocrats, as were the MDGs. Moreover, whatever targets are set will need to be adapted to each country and region's socio-economic circumstances, reverting the past practice under the UN Development Decades, the WSC and the UN conferences of the 1990s. This will be true for all goals, not just those for health and for child survival.

How will health be handled in the post-2015 agenda? There does seem to be a consensus emerging that post-2015 will include a single health goal, but with several targets. WHO is proposing Universal Health Coverage (UHC) as an inclusive umbrella under which diverse programmatic health goals aim to achieve gains on the determinants of health and on the causes of illness, as well as the need for health care throughout the life cycle (WHO, 2012a). The experience of the MDGs demonstrated not only that mothers' health and children's health are profoundly inter-related (catalyzing the PMNCH to promote integrated interventions), but also that a woman's right to sexual and reproductive health cannot be limited to her role as a mother. The experience also demonstrated that progress in MDG4 was intimately related to progress in MDG 1,3,6 and 7, as well as in MDG5.

*General recommendations for child survival targets and indicators*

Based on their analysis of the Power of MDG 4's Numbers, the authors recommend that the post-2015 agenda include a target for child survival, which is still denied for millions of children under five years of age, and that this target be accompanied by sub-targets on improving child

health. In general terms, the new agenda should build national health information systems, strengthen national and global accountability mechanisms, adopt a more inclusive, participatory approach to development, address equity, and express synergies between the goals. Thus, the child survival and child health targets should:

1) Be expressed, understood and monitored as a progressive realization of the universal child right to survive and thrive;
2) Be set as a global target for national adaptation, with a national plan for realizing every child's inter-related rights to life and health, together with national benchmarks set and monitored through a public and participatory process, and based on historic trends, and 'maximum available resources';
3) Require equal, or faster rate of reduction U5MR of the most excluded children, monitored by outcome indicators and process or coverage indicators that reflect major causes of child mortality, with all indicators disaggregated by quintile, gender, ethnicity, disability status and/or location;
4) Build on the recommendations of the Commission on Information and Accountability especially for monitoring national accountability mechanisms;
5) Use the Universal Periodic Review, treaty body guidance and reporting to strengthen monitoring of outcome, process and structural indicators for realizing the child's right to survival.

More specifically, the goal, targets and indicators for child survival in the post-2015 agenda, should reflect the *principle of non-discrimination* by being weighted towards measuring progress for the most marginalized children, i.e. improve by x% the survival of children nationally, and by x+5% the survival of the poorest (as a proxy for the worst off) children. Depending on a country's most significant disparities, this might require reducing the gap between the rates of survival of children in the poorest and the richest quintiles, or reducing the gap between survival of majority and minority children, between rural and urban children, or between children of illiterate mothers and mothers with secondary education. While promoting equity in outcomes, the target should also reinforce the principle of non-retrogression with the requirement that a country at least maintains and preferably accelerates the rate of improvement in child survival nationally, and across stratifiers of inequality. Measuring success needs to be fairer, with greater

progress for excluded children compared to more fortunate and greater absolute improvement in child mortality rates, scoring higher. The on-track and off-track measure of success has proved too unjust, in that countries which do the hard work of ensuring the worst off are not left behind have received scant recognition, if any.

*Participation* is at the core of a human rights approach, and in the case of the child survival and health targets, would need to be monitored by the opportunities for public participation in the process both of adapting the global target to country realities, and of preparing and monitoring a child health plan with periodic benchmarks for reaching the national targets and beyond. Other indicators would monitor the extent to which the population can participate in holding the state accountable for the quality of services, signaling, for example when a vaccinator fails to show up, or an essential medicine is out of stock.

The *indivisibility* of a child's inherent right to life and right to the highest attainable standard of health needs targets and indicators that track changes in the incidence of childhood disease that cause mortality. This means that at a minimum, targets for pneumonia, diarrhea and neonatal deaths will need to be tracked and disaggregated.

The child survival targets also need indicators to monitor the existence and use of *accountability* mechanisms; for example, is a child's right to health legally enforceable? Is transparent, disaggregated data available for public audit of progress against national benchmarks? Are SMS and other simple technologies being made available for citizen monitoring of health services and are complaints addressed? Experience in implementing the Commission on Information and Accountability's recommendations will inform the selection of accountability indicators.

*Conclusion*

MDG 4 was set at a time the human rights-based approach was still evolving, and did not build on the incipient efforts of previous global goals to embed human rights principles in targets and indicators. Today, the world community has the experience of MDG 4 to build on, but much more besides. The post-2015 agenda can count on ready resources for rights-based targets, indicators and program designs; mobilized and converging public health and human-rights

communities and; millions of children ready to realize their rights to life and to health with programs implemented and monitored for their fulfillment, without discrimination.

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