Targeting Inequalities in Child Mortality

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Save the Children United Kingdom launched on October 5th a powerful new report entitled The Next Revolution: Giving Every Child the Chance to Survive. One of its headline messages: 'Prioritise Equity'. This involves giving prominence to addressing the glaring gaps in child mortality rates between the rich and the poor in many developing countries.

The Centre for Development Policy and Research contributed research to this report that highlighted stark differentials in under-five mortality rates that were linked to inequalities in household wealth. Its findings were based on data from 95 Demographic and Health Surveys (DHS) conducted in 56 countries in the 1990s and 2000s.

Researchers from Macro International, which conducts the DHS, were able to devise in 2004 a composite household 'Wealth Index' based on information on a wide range of household assets that were collected as a regular part of such surveys (Rutstein and Johnson 2004). This index was then used to rank households by their level of wealth.

Once households were ranked, the total population was divided into fifths for comparisons on various measures of health, nutrition and education. CDPR focused its research on the under-five mortality rate and the differences in the mortality rates between the richest fifth of the population and the poorest fifth.

The under-five mortality rate is one of the three components of the Child Development Index, which CDPR helped Save the Children UK develop in 2008 (See Development Viewpoint 21, 2008).

Absolute Gaps in Mortality
What does the ranking by the composite Wealth Index reveal? It underscores that in some developing countries there are shockingly large gaps in under-five mortality rates between the richest and the poorest fifths of the population.

In Nigeria, for example, the absolute gap between the richest and poorest fifths of the population was 178 deaths per 1,000 live births in 2003 (when the last DHS was conducted). While the under-five mortality rate among the poorest was 257, it was only 79 among the richest.

In fact, the under-five mortality rate was well over 200 for 60% of the Nigerian population. Judging by health conditions, the rich in Nigeria appear to live in a completely different country.

It is worth underlining here that in many poor countries the level of mortality is often very similar across the poorest 40% of the population, and sometimes even the poorest 60%. Appallingly poor health is not a problem solely for the poorest fifth.

The absolute gap in mortality rates between rich and poor in Nigeria is similar to that in a number of other low-income African countries. For example, the absolute gap in child deaths was 119 in Senegal in 2005, 110 in Mali in 2006, 104 in Guinea in 2005 and 92 in Madagascar in 2004 (see table 1).

Though smaller than in Africa, serious gaps in mortality rates are also found in some low-income Asian countries. For instance, the gap was found to be 84 in Cambodia in 2005, 78 in India in 2006 and 61 in Pakistan in 2007.

Countries with such high levels of absolute inequality usually have difficulty in reducing average levels of mortality. In fact, according to the United Nations, none of the countries just highlighted are 'on-track' to reduce the under-five mortality rate by two-thirds by 2015—the target for Millennium Development Goal #4.

Contrasts in Country Performance
The conditions in such populous countries as Nigeria and India are especially lamentable since these countries account for such a sizeable proportion of all child deaths in the world. The stark reality is that in India, over 1.9 million children born each year will die before their fifth birthday. In Nigeria the corresponding figure is 1.1 million children.

We have found, however, that a high level of initial inequality in mortality rates does not eliminate the potential for progress. For example, Demographic and Health Surveys conducted in Brazil in 1996 and in South Africa in 1998 reveal that the absolute gap in under-five mortality rates between the richest fifth and the poorest fifth was similar in both countries, namely, 66 deaths per 1,000 live births.

The Save the Children report, *The Next Revolution*, indicates that Brazil is well on its way to reaching its MDG target of an average under-five mortality rate of 19 in 2015.

Table 1: Inequalities in Child Mortality for the Most Unequal Countries

Country	Absolute Gap in Under 5 Mortality Rates between Richest and Poorest Fifth	Ratio of Poorest to Richest Fifth
Mali (2006)	110	1.9
Guinea (2005)	104	1.9
Bangladesh (2007)	43	2.0
Pakistan (2006/07)	61	2.0
Indonesia (2007)	46	2.4
Senegal (2005)	119	2.8
Madagascar (2003/04)	92	2.9
Cambodia (2005)	84	3.0
Brazil (1996)	66	3.0
Egypt (2005)	50	3.0
Morocco (2003/04)	52	3.0
India (2005/06)	78	3.0
Bolivia (2003)	82	3.2
Nigeria (2003)	178	3.2
South Africa (1998)	66	4.0
Peru (2000)	75	5.2

Source: Macro International Database

Table 2: Changes in Under-Five Mortality Rates Over Time

Selected On- Track Countries				Selected Off-Track Countries			
Country (Start Year, End Year)	Change in Child Mortality Rates by Wealth Quintiles			Country (Start Year, End Year)	Change in Child Mortality Rates by Wealth Quintiles		
	Bottom Fifth	Top Fifth	Average		Bottom Fifth	Top Fifth	Average
Eritrea (1995, 2002)	-35%	-37%	-30%	Benin (1996, 2001)	-5%	-15%	-12%
Egypt (2000, 2005)	-24%	-26%	-28%	Ethiopia (2000, 2005)	-18%	-37%	-30%
Morocco (1992, 2003/04)	-30%	-33%	-36%	Madagascar (1997, 2003/04)	-27%	-51%	-32%
Bangladesh (2000, 2007)	-29%	-39%	-23%	Mali (2001, 2006)	-6%	-17%	-10%
Indonesia (1997, 2007)	-29%	9%	-28%	Senegal (1997, 2005)	1%	-7%	-3%
Nepal (2001, 2006)	-24%	-31%	-27%	Tanzania (1999, 2004)	-14%	-31%	-18%
Bolivia (1994, 2003)	-32%	-30%	-30%	Cambodia (2000, 2005)	-18%	-32%	-13%
Peru (1996, 2000)	-16%	-20%	-12%	Pakistan (1990/91, 2006/07)	-3%	-19%	-23%
Average On-track Countries	**-27%**	**-26%**	**-27%**	**Average Off-track Countries**	**-11%**	**-26%**	**-17%**

Source: Macro International Database

By 2007, this rate had already dropped to 22, well below its level of 58 in 1990. Brazil's progress has been due, in no small part, to implementing a significant range of inequality-reducing social and economic policies, such as raising the real minimum wage, providing rural pensions and distributing cash transfers.

In contrast, South Africa's target of 20 in 2015 appears to be out of reach since its average under-five mortality rate has declined only marginally, i.e., from 64 in 1990 to 59 in 2007. Though South Africa has achieved some social progress since the end of apartheid, its economic progress—particularly in creating decent jobs—has remained sluggish.

Lessons from On-Track Countries

What can we learn from the countries that are on track to reach the MDG #4 target of reducing under-five mortality by two-thirds by 2015? Table 2 highlights the differences between eight representative 'on-track' countries and eight representative 'off-track' countries.

Table 2 includes some of the countries—such as Madagascar, Mali and Senegal in Africa and Cambodia and Pakistan in Asia—which have had large absolute gaps in mortality rates between the rich and poor. All five are 'off-track' to reach the MDG target.

But what is distinctive about these five countries as well as the other three that are 'off-track' is not so much their initial level of inequality as their differential rates of progress in reducing mortality across the entire population. Their progress in reducing under-five mortality has been markedly slower among the poorest fifth than among the richest fifth, or than among the whole population.

While there was an average 26% reduction in mortality rate among the richest fifth of the population in these eight 'off-track' countries, and an 17% reduction for the whole population, there was only an 11% reduction among the poorest fifth. Hence, the ratio of the mortality rate of the poorest fifth to that of the richest fifth increased by 17% over time.

By contrast, among the eight countries that are 'on-track' to reach the MDG target, progress in reducing under-five mortality among the poorest fifth has been roughly as fast as among the richest fifth or at least among the whole population.

The average reduction in the mortality rate among the poorest fifth was 27% while the reduction among the richest fifth was 26% and that among the

whole population 27%. Hence, the average ratio of the mortality rate of the poorest fifth to that of the richest fifth marginally declined.

Note that in half of these countries, such as Bolivia, Egypt, Morocco and Peru, a high initial *relative* level of inequality (that is, a high ratio of the mortality rate of the poorest fifth to that of the richest fifth) has not created a roadblock to overall progress. For instance, in Egypt and Morocco the mortality rate of the poorest fifth has been three times higher than that of the richest fifth; in Bolivia it has been 3.2 times higher; and in Peru over 5 times higher (table 1).

Nevertheless, measures were undertaken in these countries to ensure significant progress against mortality among the poorest 20% of the population, and even among the poorest 40%. Among all eight 'on-track' countries, the average reduction in mortality rates among the poorest *two-fifths* was the same, in fact, as for the whole population.

Some of these countries did even better: they reduced the ratio of the mortality rate of the poorest two-fifths to that of the richest two-fifths. Indonesia succeeded in reducing this ratio by 13%, for example. Bangladesh and Egypt also managed to modestly reduce this ratio.

General Lessons

What general lessons can we draw from these findings? The MDG target of reducing the under-five mortality rate by two-thirds by 2015 is not unduly ambitious. Over a 25-year period, steady concerted progress can certainly achieve the target. Many countries are 'on-track' to do so.

However, sharp inequalities in mortality rates among the rich and poor can, indeed, become a significant obstacle to progress. If the poor make much slower progress than the rich, reaching the MDG target is likely to be difficult.

If, by contrast, progress among the poorest is as fast as that of the richest, or at least as fast as the overall average, the prospects for success are measurably enhanced. This appears to be a 'bottom-line' condition of success.

Hence, attaining at least *equitable progress* should be a priority policy objective. Managing to reduce inequality in mortality rates between the rich and poor, such as some countries have done, would, of course, be better still.

References:
Rutstein, Shea Oscar and Kiersten Johnson (2004). 'The DHS Wealth Index', DHS Comparative Reports No. 6, August, ORC Macro, Calverton, Maryland, USA.