

Improving Global Child Health in the Light of the (Old) Millennium Development Goals and the (New) Sustainable Development Goals

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THE MILLENNIUM DEVELOPMENT GOALS

Introduction

In the year 2000, the “Millennium Declaration” was formulated including 8 Millennium Development Goals (MDGs). The objective was to compare the achievement of the MDGs in the year 2015 with the baseline assessment done in the year 1990.¹ For pediatrics, with respect to health, 3 of the 8 MDG (MDG-4, -5 and -6) were of relevance; in relation to mortality, the MDG-4 [reduction of under-5 years mortality rate (U5MR) by 66%] and MDG-5 [reduction in maternal mortality (MM) by 75%] were of importance.^{2,3} MDG-4 had an additional second goal to increase measles vaccine coverage and reducing measles-related child mortality. MDG-6 was also of importance for child health because the aim was to combat HIV/AIDS, malaria and other major diseases in adults and children. This should be achieved by holding and reversing the spread of HIV/AIDS and creating universal access to HIV treatment and by reversing the spread of other major (old) diseases like tuberculosis and malaria and emerging diseases like Ebola.^{4,5} Other MDGs were not focusing on health but on, for example, education, poverty reduction and gender equality.

For the MDGs, the 2015 deadline has passed. It is therefore the right moment to raise questions with respect to the achievements of

the MDGs: have the goals been achieved? How have Asia and Africa done in comparison with, for example, Europe and the United States? Has the reduction in pediatric and maternal mortality been comparable between the different regions? But apart from raising questions it is also the right time to look into the future to find out what the critical outstanding challenges are, for example, is there a need to adjust the goals?

What Has Been Achieved

With respect to the achievement of MDG-4, we are allowed to be slightly optimistic. On a global scale, the U5MR has dropped by 53% between 1990 and 2015, which is comparable to the drop seen in the developing regions alone (from 100 to 47 deaths per 1000 live births).² Although the MDG-4 (66% reduction) has not been met, it is still an impressive reduction in U5MR. However, one has to realize that this success does not mean that we are nearly there. There are some major challenges still to overcome. For example, in Sub-Saharan Africa today, the U5MR is still nearly 15 times higher when compared with the developed world (86 vs. 6 death per 1000 live births) and 11 times higher than in Eastern Asia (86 vs. 11 per 1000). Furthermore, all 16 countries that still have a U5MR over 100 per 1000 are found in Sub-Saharan Africa. Secondly, the global reduction in the U5MR has mainly been achieved in the postneonatal period.^{6,7} Over the past 25 years, the reduction in mortality in the neonatal period was only 33%. As a consequence, the share of the neonatal death in the total U5MR has increased over time. Of the total neonatal death, 36% occurs in the first day and 73% (2 million per year) in the first week of life. Of these neonatal death, 15% are due to sepsis/infections, whereas the majority (59%) are either due to prematurity or complications during labor.

A great success has been measles control and prevention of measles-related death. Between 2000 and 2014, measles vaccination coverage has increased from 73% to 85% for the first vaccine dose and from 15% to 53% for the second dose. As a consequence, measles-related mortality has dropped by nearly

75%, with 93% of remaining death occurring in Southern Asia and Africa.⁸ This is very good news, but one has to realize that there are still 21 million infants annually who do not receive a measles vaccine, and progress of the measles campaign has stalled globally since 2010, indicating that the successes are fragile. This is not only a problem of developing countries. For example, in most Europe countries, measles vaccine coverage is 90% or more, with Austria and Italy as the worse performers with a coverage of 76% and 86%, respectively. But, even in the better performing European countries, progress, in recent years, has been slow or absent, which may reflect a more critical view of the public towards vaccination programmes in general. The same accounts for the United States, which has a measles vaccination coverage of only 91% in the year 2014, which is 2% less than the coverage in the year 2004. In 2012, WHO has launched a “Global Measles and Rubella Strategic Plan.”⁹ It has to be seen if this plan will bring us closer to our aim of a global eradication of Measles.

With respect to MDG-5 (improving maternal health), the story is not so positive. None of the global regions managed to reach the target of 75% reduction in Maternal Mortality (MM). Again Sub-Saharan Africa remains in the lead with a MM rate of 510 per 100,000 women,³ which is more than 30 times higher when compared with the developed world (16 per 100,000) and nearly 20 times higher than Eastern Asia (33 per 100,000).³ It is critical for maternal and neonatal survival that deliveries are supervised by a skilled health worker (doctor, nurse or midwife). However, in South Asia and Africa, this is the case in only half of the deliveries.¹⁰ In the rural areas, these figures may even be much worse with only 1 in 3 deliveries attended by a skilled health worker. It is not surprising that these 2 regions have the highest rates of newborn and maternal mortality in the world. The causes of MM vary widely between regions; however, the sepsis contribution to MM shows a stable pattern being responsible for around 10% of MM cases globally in 2015.³ The role of HIV is of importance in Africa, responsible for 1.5%

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of MM cases, with the highest burden (6.2%) in Southern Sub-Saharan Africa. When interpreting these MM figures, one has to realize that only half of the countries in the world have data on maternal causes of death. The final MDG-5 issues, especially from a pediatric point of view, are pregnancies among adolescent girls (15–19 years). Successes in reducing the number of pregnancies among adolescent girls have been minimal with a global drop of only 9 births in 1000 girls over the 25 years period (from 59 to 50 births). Sub-Saharan Africa is again in the lead with 116 births per 1000 adolescent girls (with a drop of only 7 births) by 2015, whereas Southern Asia has been able to nearly half the number of births in this age group. Reducing the number of pregnancies in this age group is critical because MM is 1.5 times higher in adolescent girls when compared with women aged between 20 and 29 years.³

MDG-6 includes a heterogeneous group of communicable and noncommunicable diseases. The success of MDG-6 with respect to the pediatric population is very diverse when looking at the various diseases. The worse performance is seen in HIV, with a dramatic increase in the HIV prevalence rate between 1990 and 2013. This is also translated in an 80% increase in the number of children dying of AIDS. When looking at the malaria MRs, due to conflicting reports, it is difficult to estimate the MDG-6 achievement. The official United Nations report on the MDGs¹ states that the malaria goal has been reached based on a reduction in malaria mortality of 58% between 2000 and 2015. However, a 2015 *Lancet* article⁴ indicates that the number of malaria deaths in children under the age of 5 has increased from 566,000 to 570,000 between 1990 and 2013. It is difficult to explain this big discrepancy between the 2 reports by the different time periods used in the 2 reports or by the fact that the second report focused on mortality in young children only. However, the second report does also give examples of MDG-6 successes with over 50% reduction in mortality due

to communicable (and vaccine preventable) diseases like measles, tetanus and whooping cough. Especially, the reduction of the tetanus- and measles-related mortality of 91% and 83% over the 25 years period is very impressive clearly indicating the important role of the expanded programme of immunization in achieving the MDG-6. But, also MRs for meningitis, diarrheal disease, pneumonia and neonatal sepsis have dropped over the MDG period. Improvement in treatment and prevention of infectious diseases has clearly contributed to the success of MDG-6. However, the mortality reduction was also seen in noncommunicable diseases, indicating that improvement of child health in general (possibly as a result of social economic improvements) also contributed to the MDG success.

SUSTAINABLE DEVELOPMENT GOALS

It was clear when the end of the MDG period came closer that the international community became more aware that the momentum created by—and the successes of—the MDGs should be sustained.¹¹ This resulted in the formulation of the “Sustainable Development Goals” or SDGs, with the aim to come to a more prosperous, sustainable and equitable world by the year 2030. From the analysis of the MDG-4, it is clear that most of the successes were made in the children who were able to survive their neonatal period and that infection prevention and treatment played a major role in these successes. The lack of success in the neonatal period (of MDG-4) is in line with the lack of success to reduce the maternal MR (MDG-5). It is therefore not surprising that in the formulation of the SDGs, special attention has been given to the importance of improving the care for women in the antenatal period and during—and in the weeks after—childbirth. However, taken the limited healthcare budgets in many countries in the developing world, there is serious worry that

by focusing on the SDGs, funds may be used that were originally allocated to sustain the MDG successes (eg, MDG-6). Time will tell if this worry is right.

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