

# FINAL DRAFT

## **Reaching the Health-Related MDGs in 49 Low Income Countries: Estimates of Cost, Financing Gap and Health Impact**

### **Technical Summary\*for Working Group 1 of the High-Level Task Force (HLTF) on Innovative Finance for Health Systems**

#### **Estimates produced by:**

- 1. WHO and partners (Futures Institute and USAID/DELIVER project) with collaboration from UNFPA and UNAIDS**
- 2. UNICEF, UNFPA, World Bank, Partnership for Maternal, Newborn and Child Health**

\* This summary puts together two exercises that were run in parallel. These are reported in greater detail in two separate technical papers (forthcoming). Questions related to the WHO exercise can be directed to Dr. Tessa Tan-Torres Edejer at [tantorrest@who.int](mailto:tantorrest@who.int). Questions related to the MBB scenarios can be directed to Dr. Agnes Soucat at [asoucat@worldbank.org](mailto:asoucat@worldbank.org).

## 1. Introduction

In September 2008, world leaders called for an additional US\$30 billion at the High Level Event on the Millennium Development Goals (MDGs), to contribute to saving the lives of 3 million mothers and 7 million children.<sup>\*</sup> They announced the creation of a High Level Task Force on Innovative Financing for Health Systems (HLTF). The objective of the HLTF is to contribute to filling national financing gaps to reach the health MDGs through mobilizing additional resources, increasing the financial efficiency of health financing, and enhancing the effective use of funds.

Two technical working groups were established to present analyses and recommendations to the HLTF: Working Group 1 (WG1) on Constraints to Scaling Up and Costs, and Working Group 2 (WG2) on Raising and Channeling Funds. WG1 required analyses to be provided for 49 low-income countries<sup>†</sup> (listed in Annex 1) for the costs associated with strengthening health systems to reach the health related MDGs, the expected health impact, and the financing gaps under various financing scenarios. Two parallel streams of work were undertaken, one based on the WHO normative approach and one based on the Marginal Budgeting for Bottlenecks (MBB) costing methodology. This report summarizes the results of both approaches.

## 2. Methods

### 2.1. WHO Normative Approach

WHO and partners (Futures Institute and USAID /DELIVER PROJECT) utilized a normative approach, with collaboration from UNFPA and UNAIDS. The normative approach considers the amount of resources required to scale up country health systems to a level that is considered “best practice” by experts and practitioners. This approach is based on reaching universal coverage and utilizing proven interventions (listed in Annex 2) to reach the health MDGs between now and 2015. This approach is consistent with international commitments and builds on previously published global costing on the health MDGs.

### 2.2. Marginal Budgeting for Bottlenecks

The World Bank and UNICEF built on the Marginal Budgeting for Bottlenecks (MBB) costing methodology, with collaboration from UNFPA and the Partnership on Maternal Newborn and Child Health (PMNCH). The methodology identifies the critical constraints of existing health systems (bottlenecks) for scaling up effective interventions, and then identifies the strategies to overcome them. It finally estimates the consequent health outcomes and costs related to health system strengthening and increase in coverage. It has been applied in 39 countries. In addition, it was used in the recent development of investment cases for health related MDGs in the Asia-Pacific Region, and in the WHO-UNICEF-WB Strategic framework for reaching MDG 4 and other health related MDGs in Africa. The MBB approach identifies impacts, incremental funding needs and gaps based on three implementation scenarios:

- **Maximum scenario:** reaching the health related MDGs and beyond;
- **Medium scenario:** reaching the health MDGs (4, 5, and 6) and contributing substantially to MDGs 1 and 7;
- **Minimum scenario:** focusing on the highest impact and lowest cost interventions and strategies to accelerate progress towards the neglected MDGs, namely 4 and 5.

Interventions are listed in Annex 3.

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<sup>\*</sup> <http://www.un.org/millenniumgoals/2008highlevel/>

<sup>†</sup> As defined by the World Bank, through the Atlas methodology.

### **3. Results**

#### **3.1. Costs**

Table 1 below presents the estimates of additional resources needed according to the different scenarios (i.e. WHO normative approach and MBB Maximum, Medium and Minimum scenarios) for the 49 countries. The additional costs are presented both in absolute values (in billion US\$) for the period 2009-2015 and for 2015, and in per capita terms. Capital costs are entered when incurred and not annualized.

The WHO normative approach and the MBB Maximum scenario lead to comparable results in terms of the additional resources needed to reach universal coverage with a basic package of services. The MBB Medium and MBB Minimum scenarios require fewer additional resources as their aims are less comprehensive. These results also highlight that, as one would expect, a larger share of the additional resources are needed in SSA countries than in non SSA countries, although the total populations assessed in the SSA group and non-SSA group are similar. In the case of the WHO normative approach, it is estimated that 60 percent of the total additional resources need to flow to SSA. This share is slightly higher (over 70 percent) in the MBB scenarios.

With regard to the breakdown by input, Table 1 shows that in the WHO normative approach, 40 percent of total costs would be allocated to capital investment and 60 percent to recurrent costs. MBB Medium and Minimum scenarios show comparable allocation to capital investment at 48% and 38%, respectively. In contrast, the MBB Maximum scenario shows a greater emphasis on capital expenditure (58 percent of total costs).

In the WHO normative approach and MBB Maximum scenario, the share of traded and non traded costs are comparable (38 percent traded). However, in the MBB Medium and Minimum scenario, 46 percent and 53 percent of the costs respectively are traded.

Finally, comparing the costs between program and disease and health systems, the difference is significant for both the WHO normative approach and the MBB scenarios. In the case of the WHO approach, three quarters of total costs would be allocated to health systems. The MBB allocation by specific program and health system involves 52 percent of the total costs going to program and disease in the Maximum scenario, 38 percent in the Medium scenario and finally 52 percent in the Minimum scenario.

**Table 1: Main costs and main cost breakdowns (2009-2015)**

	WHO Normative Approach	MBB Maximum Scenario	MBB Medium Scenario	MBB Minimum Scenario
Total Additional Costs (2009-2015) US\$ billion	\$251.44	\$227.24	\$111.62	\$67.46
Total Additional Costs (2009-2015) US\$ per capita	\$172	\$151	\$74	\$45
Total Additional Costs in 2015 US\$ billion	\$ 45.16	\$57.99	\$36.48	\$18.61
Total Additional Costs in 2015 US\$ per capita	\$ 29	\$ 38	\$24	\$12
<b>Breakdown by input (2009-2015) US\$ billion (%)</b>				
Capital	\$ 100.73 (40%)	\$132.45 (58%)	\$53.94 (48%)	\$25.95 (38%)
Recurrent	\$ 150.70 (60%)	\$94.79 (42%)	\$57.68 (52%)	\$41.51 (62%)
<i>Personnel</i>	\$ 55.46 (22%)	\$20.72 (9%)	\$13.35 (12%)	\$10.18 (15%)
<i>Drugs and supplies</i>	\$ 31.86 (13%)	\$41.1 (18%)	\$23.87 (21%)	\$19.81 (29%)
<i>Other</i>	\$ 63.38 (25%)	\$32.97 (15%)	\$20.46 (19%)	\$11.52 (18%)
Traded Costs (2009-2015) US\$ billion (%)	\$ 95.91 (38%)	\$87.16 (38%)	\$51.54 (46%)	\$35.51 (53%)
Non Traded Costs (2009-2015) US\$ billion (%)	\$ 155.21 (62%)	\$140.08 (62%)	\$60.09 (54%)	\$31.95 (47%)
<b>Breakdown by specific programmes and health system elements US\$ billion (%)</b>				
Program and Disease*	\$ 65.70 (26%)	\$117.47 (52%)	\$42.69 (38%)	\$34.81 (52%)
<i>Management of childhood illness</i>	\$ 2.53 (1%)	\$5.93 (3%)	\$3.64 (3%)	\$3.31 (5%)
<i>Immunization</i>	\$ 6.27 (2%)	\$8.8 (4%)	\$4.9 (4%)	\$3.45 (5%)
<i>Maternal health</i>	\$ 11.82 (5%)	\$7.51 (3%)	\$5.62 (5%)	\$3.72 (6%)
<i>Family planning</i>	\$ 8.43 (3%)	\$3.02 (1%)	\$2.81 (3%)	\$2.19 (3%)
<i>HIV/AIDS</i>	\$ 15.13 (6%)	\$12.73 (6%)	\$9.07 (8%)	\$7.34 (11%)
<i>TB†</i>	\$ 4.78 (2%)	\$2.38 (1%)	\$1.82 (2%)	\$1.41 (2%)
<i>Malaria</i>	\$ 7.25 (3%)	\$12.84 (6%)	\$10.67 (10%)	\$10.67 (16%)
<i>Essential drugs (NCD, MH, Parasitic Diseases)</i>	\$ 9.48 (4%)	\$11.22 (5%)	\$0 (0%)	\$0 (0%)
<i>Water and Sanitation</i>		\$49.12 (22%)	\$0.73 (1%)	\$0.03 (0%)
<i>Nutrition</i>		\$3.92 (2%)	\$3.44 (3%)	\$2.69 (4%)
Health Systems	\$ 185.73 (74%)	\$109.77 (48%)	\$68.93 (62%)	\$32.65 (48%)
<i>Human resources</i>	\$ 62.28 (25%)	\$26.21 (12%)	\$21.19 (19%)	\$14.64 (22%)
<i>Infrastructure, transport and equipment</i>	\$ 91.23 (36%)	\$50.04 (22%)	\$28.83 (26%)	\$9.43 (14%)
<i>Supply Chain / Logistics</i>	\$ 12.82 (5%)	\$20.41 (9%)	\$8.75 (8%)	\$3.42 (5%)
<i>Health information Systems</i>	\$ 4.52 (2%)	\$2.09 (1%)	\$1.49 (1%)	\$1.11 (2%)
<i>Governance, accreditation and regulation</i>	\$ 5.56 (2%)	\$7.83 (3%)	\$6.36 (6%)	\$4.05 (6%)
<i>Health financing</i>	\$ 9.34 (4%)	\$3.19 (1%)	\$2.3 (2%)	\$0 (0%)
<b>Breakdown by region (2009-2015) US\$ billion (%)</b>				
SSA Costs (2009-2015) US\$ billion (%)	\$ 150.81 (60%)	\$172.47 (76%)	\$89.19 (80%)	\$48.29 (72%)
Non SSA Costs (2009-2015) US\$ billion (%)	\$ 100.62 (40%)	\$54.77 (24%)	\$22.43 (20%)	\$19.17 (28%)

Tables 2-4 below present the additional costs by capital and recurrent expenditure for the 49 countries, and for SSA countries and non SSA countries, both in absolute numbers and in per capita values. The share of recurrent and capital spending in SSA countries and non SSA countries follows the trend observed above for the 49 countries under the WHO normative approach and MBB scenarios. Profiles over time, including with respect to capital and recurrent, show marked differences between WHO and MBB scenarios, with capital costs incurred earlier under WHO than under MBB.

\* Generic human resources and infrastructure costs included under health systems

† The TB cost estimates in the MBB scenarios are only for TB drugs. HR, program and equipment costs are included with health systems

**Table 2: Additional costs by year for the 49 countries (total and per capita)**

	2009	2010	2011	2012	2013	2014	2015	Total
<b>Total (in US\$ billions)</b>								
WHO Normative Approach	\$ 19.34	\$ 27.47	\$ 36.01	\$ 41.79	\$ 39.56	\$ 42.11	\$ 45.16	\$ 251.44
<i>Capital</i>	\$ 12.80	\$ 17.58	\$ 22.88	\$ 23.34	\$ 13.60	\$ 8.28	\$ 2.25	\$ 100.73
<i>Recurrent</i>	\$ 6.54	\$ 9.88	\$ 13.12	\$ 18.45	\$ 25.96	\$ 33.84	\$ 42.91	\$ 150.70
MBB Maximum Scenario	\$12.73	\$16.7	\$23.57	\$24.43	\$27.66	\$64.17	\$57.99	\$227.24
<i>Capital</i>	\$9.73	\$10.63	\$13.47	\$11.35	\$10.79	\$43.2	\$33.28	\$132.45
<i>Recurrent</i>	\$3	\$6.06	\$10.09	\$13.08	\$16.87	\$20.97	\$24.71	\$94.79
MBB Medium Scenario	\$4.3	\$5.65	\$7.31	\$12.64	\$18.61	\$26.62	\$36.48	\$111.62
<i>Capital</i>	\$2.49	\$2.45	\$2.69	\$5.61	\$8.29	\$13.06	\$19.36	\$53.94
<i>Recurrent</i>	\$1.81	\$3.21	\$4.62	\$7.03	\$10.32	\$13.56	\$17.13	\$57.68
MBB Minimum Scenario	\$2.95	\$4.42	\$6.57	\$8.47	\$10.78	\$15.65	\$18.61	\$67.46
<i>Capital</i>	\$1.82	\$2.03	\$2.51	\$2.84	\$3.05	\$6.26	\$7.45	\$25.95
<i>Recurrent</i>	\$1.14	\$2.4	\$4.06	\$5.63	\$7.73	\$9.39	\$11.17	\$41.51
<b>Per capita (in US\$)</b>								
WHO Normative Approach	\$ 14.20	\$ 19.75	\$ 25.35	\$ 28.82	\$ 26.72	\$ 27.87	\$ 29.30	\$ 172.01
<i>Capital</i>	\$ 9.40	\$ 12.64	\$ 16.11	\$ 16.10	\$ 9.18	\$ 5.48	\$ 1.46	\$ 70.37
<i>Recurrent</i>	\$ 4.80	\$ 7.11	\$ 9.24	\$ 12.72	\$ 17.54	\$ 22.40	\$ 27.84	\$ 101.64
MBB Maximum Scenario	\$8.9	\$11.67	\$16.47	\$16.41	\$18.58	\$41.61	\$37.6	\$151.24
<i>Capital</i>	\$6.8	\$7.43	\$9.42	\$7.62	\$7.25	\$28.01	\$21.58	\$88.11
<i>Recurrent</i>	\$2.1	\$4.24	\$7.06	\$8.79	\$11.33	\$13.6	\$16.02	\$63.14
MBB Medium Scenario	\$3	\$3.95	\$5.11	\$8.49	\$12.51	\$17.26	\$23.66	\$73.98
<i>Capital</i>	\$1.74	\$1.71	\$1.88	\$3.77	\$5.57	\$8.47	\$12.55	\$35.69
<i>Recurrent</i>	\$1.26	\$2.24	\$3.23	\$4.73	\$6.94	\$8.79	\$11.11	\$38.30
MBB Minimum Scenario	\$2.06	\$3.09	\$4.59	\$5.68	\$7.22	\$10.1	\$12.01	\$44.75
<i>Capital</i>	\$1.27	\$1.42	\$1.76	\$1.9	\$2.05	\$4.04	\$4.8	\$17.24
<i>Recurrent</i>	\$0.79	\$1.68	\$2.84	\$3.78	\$5.18	\$6.06	\$7.21	\$27.54

**Table 3: Additional costs by year for Sub-Saharan Africa (total and per capita)**

	2009	2010	2011	2012	2013	2014	2015	Total
<b>Total (in US\$ billions)</b>								
WHO Normative Approach	\$ 11.14	\$ 16.05	\$ 21.01	\$ 24.72	\$ 24.11	\$ 25.82	\$ 27.96	\$ 150.81
<i>Capital</i>	\$ 6.79	\$ 9.53	\$ 12.59	\$ 12.90	\$ 7.75	\$ 4.81	\$ 1.50	\$ 55.89
<i>Recurrent</i>	\$ 4.35	\$ 6.52	\$ 8.41	\$ 11.82	\$ 16.36	\$ 21.00	\$ 26.46	\$ 94.93
MBB Maximum Scenario	\$9.96	\$13.25	\$18.99	\$18.71	\$21.06	\$47.03	\$43.47	\$172.47
<i>Capital</i>	\$7.84	\$8.91	\$11.64	\$9.28	\$9.05	\$32.31	\$26.47	\$105.51
<i>Recurrent</i>	\$2.11	\$4.34	\$7.35	\$9.43	\$12	\$14.72	\$17	\$66.96
MBB Medium Scenario	\$3.19	\$4.07	\$5.15	\$9.96	\$15.27	\$21.4	\$30.15	\$89.19
<i>Capital</i>	\$1.88	\$1.8	\$1.93	\$4.78	\$7.32	\$10.98	\$17.07	\$45.75
<i>Recurrent</i>	\$1.31	\$2.27	\$3.22	\$5.18	\$7.95	\$10.42	\$13.09	\$43.44
MBB Minimum Scenario	\$2	\$3.1	\$4.79	\$6.01	\$7.67	\$11.27	\$13.44	\$48.29
<i>Capital</i>	\$1.29	\$1.49	\$1.9	\$2	\$2.07	\$4.6	\$5.69	\$19.05
<i>Recurrent</i>	\$0.71	\$1.61	\$2.89	\$4.02	\$5.6	\$6.66	\$7.75	\$29.24
<b>Per capita (in US\$)</b>								
WHO Normative Approach	\$ 15.84	\$ 22.25	\$ 28.41	\$ 32.61	\$ 31.05	\$ 32.45	\$ 34.32	\$ 196.92
<i>Capital</i>	\$ 9.66	\$ 13.21	\$ 17.03	\$ 17.02	\$ 9.98	\$ 6.05	\$ 1.84	\$ 74.79
<i>Recurrent</i>	\$ 6.18	\$ 9.03	\$ 11.38	\$ 15.60	\$ 21.06	\$ 26.40	\$ 32.48	\$ 122.13
MBB Maximum Scenario	\$13.38	\$17.8	\$25.51	\$24.05	\$27.07	\$58.11	\$53.71	\$219.63
<i>Capital</i>	\$10.54	\$11.97	\$15.64	\$11.93	\$11.64	\$39.92	\$32.71	\$134.35
<i>Recurrent</i>	\$2.84	\$5.83	\$9.87	\$12.13	\$15.43	\$18.19	\$21	\$85.29
MBB Medium Scenario	\$4.28	\$5.47	\$6.92	\$12.81	\$19.63	\$26.44	\$37.26	\$112.81
<i>Capital</i>	\$2.52	\$2.42	\$2.59	\$6.15	\$9.4	\$13.57	\$21.09	\$57.74

<i>Recurrent</i>	\$1.76	\$3.05	\$4.33	\$6.66	\$10.22	\$12.87	\$16.17	\$55.06
MBB Minimum Scenario	\$2.69	\$4.17	\$6.44	\$7.69	\$9.82	\$13.78	\$16.44	\$61.03
<i>Capital</i>	\$1.74	\$2	\$2.56	\$2.55	\$2.65	\$5.63	\$6.96	\$24.09
<i>Recurrent</i>	\$0.95	\$2.17	\$3.89	\$5.14	\$7.16	\$8.15	\$9.48	\$36.94

**Table 4: Additional costs by year for non Sub-Saharan African countries (total and per capita)**

	2009	2010	2011	2012	2013	2014	2015	Total
<b>Total (in US\$ billions)</b>								
WHO Normative Approach	\$ 8.20	\$ 11.42	\$ 15.00	\$ 17.07	\$ 15.45	\$ 16.30	\$ 17.19	\$ 100.62
<i>Capital</i>	\$ 6.01	\$ 8.05	\$ 10.29	\$ 10.44	\$ 5.84	\$ 3.46	\$ 0.75	\$ 44.85
<i>Recurrent</i>	\$ 2.19	\$ 3.37	\$ 4.71	\$ 6.63	\$ 9.60	\$ 12.83	\$ 16.45	\$ 55.78
MBB Maximum Scenario	\$2.77	\$3.45	\$4.58	\$5.72	\$6.6	\$17.14	\$14.51	\$54.77
<i>Capital</i>	\$1.88	\$1.72	\$1.83	\$2.07	\$1.74	\$10.89	\$6.8	\$26.93
<i>Recurrent</i>	\$0.89	\$1.73	\$2.75	\$3.65	\$4.87	\$6.25	\$7.71	\$27.84
MBB Medium Scenario	\$1.11	\$1.58	\$2.17	\$2.68	\$3.35	\$5.22	\$6.33	\$22.43
<i>Capital</i>	\$0.61	\$0.65	\$0.76	\$0.83	\$0.98	\$2.08	\$2.29	\$8.19
<i>Recurrent</i>	\$0.5	\$0.93	\$1.4	\$1.85	\$2.37	\$3.14	\$4.04	\$14.24
MBB Minimum Scenario	\$0.95	\$1.32	\$1.77	\$2.46	\$3.11	\$4.38	\$5.18	\$19.17
<i>Capital</i>	\$0.52	\$0.53	\$0.61	\$0.84	\$0.98	\$1.66	\$1.76	\$6.9
<i>Recurrent</i>	\$0.43	\$0.79	\$1.16	\$1.62	\$2.13	\$2.73	\$3.42	\$12.27
<b>Per capita (in US\$)</b>								
WHO Normative Approach	\$ 12.45	\$ 17.05	\$ 22.03	\$ 24.66	\$ 21.95	\$ 22.79	\$ 23.66	\$ 144.60
<i>Capital</i>	\$ 9.13	\$ 12.03	\$ 15.11	\$ 15.09	\$ 8.30	\$ 4.84	\$ 1.03	\$ 65.53
<i>Recurrent</i>	\$ 3.32	\$ 5.03	\$ 6.92	\$ 9.57	\$ 13.65	\$ 17.95	\$ 22.63	\$ 79.07
MBB Maximum Scenario	\$4.04	\$5.02	\$6.67	\$8.05	\$9.29	\$23.38	\$19.8	\$76.25
<i>Capital</i>	\$2.75	\$2.51	\$2.67	\$2.91	\$2.44	\$14.86	\$9.28	\$37.42
<i>Recurrent</i>	\$1.3	\$2.52	\$4	\$5.13	\$6.85	\$8.53	\$10.52	\$38.85
MBB Medium Scenario	\$1.62	\$2.31	\$3.16	\$3.77	\$4.71	\$7.12	\$8.64	\$31.33
<i>Capital</i>	\$0.89	\$0.95	\$1.11	\$1.16	\$1.37	\$2.84	\$3.13	\$11.45
<i>Recurrent</i>	\$0.73	\$1.36	\$2.04	\$2.61	\$3.34	\$4.28	\$5.51	\$19.87
MBB Minimum Scenario	\$1.39	\$1.92	\$2.58	\$3.46	\$4.37	\$5.98	\$7.07	\$26.77
<i>Capital</i>	\$0.76	\$0.78	\$0.89	\$1.18	\$1.38	\$2.26	\$2.4	\$9.65
<i>Recurrent</i>	\$0.63	\$1.11	\$1.57	\$2.19	\$2.97	\$3.8	\$4.91	\$17.18

### 3.2. Financing gap

Additional financing has been estimated based on WHO calculations\*. Baseline expenditures estimated for 2008, from which projections were made, are presented in Table 5.

**Table 5: 2008 baseline expenditure data (billion US\$) (48 countries)**

<b>2008</b>	
<b>All countries</b>	30.65
... Government	7.99
... External	5.02
... Private	17.64
<b>SSA</b>	16.16
... Government	3.88
... External	3.78
... Private	8.50

\* see Technical Background Reports for details. Additional financing was estimated for 48 countries only due to lack of information on Somalia

<b>Non SSA</b>	14.49
... Government	4.12
... External	1.24
... Private	9.14

\*2008 data are estimated based on 2006 data

Two scenarios were chosen to project the available additional financing by 2015: a no change scenario in which public, private, and external sources of funds would evolve in line with country GDP, and a commitments met scenario, in which countries would abide by the various pledges they have made.

**Table 6: Assumptions for the additional financing scenarios**

<b>WHO scenarios (all in 2005 constant US\$)</b>			
	<b>Scenario 1: No change</b>	<b>Scenario 2: Optimistic</b>	<b>Scenario 3: Pessimistic</b>
<b>GDP, 2008</b>	WEO, IMF April 2009 update	WEO, IMF April 2009 update	WEO, IMF April 2009 update
<b>Annual GDP growth</b>	WEO, IMF April 2009 update	WEO, IMF April 2009 update	1% less than that predicted in WEO , IMF April 2009 update
<b>Health as % of Total Government Expenditure</b>	constant 2007 GGHE (only that which is domestically funded (1)) as a share of GDP	Reaches 15% GGHE/GGE in 2015 for sub Saharan African (SSA) countries (2), and 12% for others	Constant to GDP, except for 2009-2010, where there is a 10% decrease of the share to GDP
<b>Official Development Aid for health (multilateral, bilateral and general budget support; does not include debt relief)</b>	constant proportion of ODA to donor's GDP; constant patterns of allocation to countries and sector based on 2007 OECD-CRS data	ODA target as % of GNI from OECD DAC(3); plus \$60B over five years (2009-2013) for Africa for health based on Hokkaido 2008 (4) for USA, \$63 billion distributed for health between 2009 and 2014)[5]; - doubling of US aid to SSA by 2010 - 50% of additional EU resources up to 2010 is going to SSA	Constant to GDP, except for 2009-2010, where there is a 10% decrease of the share to GDP; then returns to 2008 ratios and kept constant starting from 2011 to 2015
<b>Private expenditure for health</b>	50% of constant proportion of private health expenditures to GDP	50% of projected private funds, which were projected using elasticity to GDP (for every 1% GDP increase, private expenditure on health increases by 1.033%)	50% of constant proportion of private health expenditures to GDP

(1)GGHE general government expenditure in health; external funds flowing through the government are removed using shares obtained from NHA reports from the countries

(2)General government expenditure based on Abuja Declaration of African Union

(3)Table 4 in [www.oecd.org/dataoecd/47/56/42458719.pdf](http://www.oecd.org/dataoecd/47/56/42458719.pdf)

(4) Paragraph 46a [http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080714\\_\\_en.html](http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080714__en.html)

(5) [http://www.whitehouse.gov/the\\_press\\_office/Statement-by-the-President-on-Global-Health-Initiative/](http://www.whitehouse.gov/the_press_office/Statement-by-the-President-on-Global-Health-Initiative/)

Table 7 presents the additional financing by year under the two scenarios for low income countries. Table 8 and Table 9 present the same data, broken down for SSA and non SSA countries.

**Table 7: Additional financing for 48 countries (billion US\$ 2005) (2009-2015)**

<b>Additional financing (48 countries) million constant US\$ (05)</b>	2009	2010	2011	2012	2013	2014	2015	Total
no change scenario	441	1,142	2 266	3 556	4 953	6 453	8 039	26 850
... government	303	643	1,114	1,651	2,237	2,873	3 546	12,368
... external	-186	-193	-74	74	219	351	496	0 688
... private	324	692	1 226	1 832	2 496	3 228	3 998	13 795
optimistic scenario	6608	10,720	15 087	20 638	27 535	35 930	46 484	163 002
... government	1 574	3 577	6 311	9 923	14 698	21 105	29 686	86 875
... external	4 409	5 813	6 522	7 406	8 346	9 006	9 529	51 030
... private	625	1330	2 254	3 309	4 491	5 820	7 268	25 097
pessimistic scenario	-879	-1,308	0 511	1 685	2 955	4 317	5 757	13 039
... government	-529	-1,002	-625	-195	274	783	1 321	27
... external	-670	-990	-77	69	213	343	486	-0 627
... private	320	684	1 213	1 812	2 468	3 191	3 950	13 639

**Table 8: Incremental financing for Sub-Saharan Africa countries (billion US\$ 2005) (2009-2015)**

<b>Additional financing (SSA countries) million constant US\$ (05)</b>	2009	2010	2011	2012	2013	2014	2015	Total
no change scenario	142	451	1 032	1 678	2 367	3 085	3 853	12 607
... government	135	287	516	768	1039	1329	1637	5 712
... external	-141	-147	-58	51	160	258	366	0 490
... private	147	310	0 574	0 858	1 168	1 498	1 849	6 405
optimistic scenario	4118	6,666	9 072	12 131	15 904	20 281	25 905	94 076
... government	828	1 885	3 358	5 294	7 853	11 250	15 788	46 255
... external	2 997	4 164	4 646	5 271	5 928	6 297	6 711	36 014
... private	293	617	1 068	1 567	2 123	2 734	3 406	11 807
pessimistic scenario	-627	-941	0 184	0 774	1 405	2 059	2 759	5 613
... government	-267	-507	-324	-122	95	326	573	-226
... external	-506	-741	-61	48	155	253	359	-0 492
... private	146	307	0 568	0 849	1 155	1 480	1 827	6 332

**Table 9: Incremental financing for non SSA countries (billion US\$ 2005) (2009-2015)**

<b>Additional financing (non SSA countries) million constant US\$ (05)</b>	2009	2010	2011	2012	2013	2014	2015	Total
no change scenario	299	691	1 234	1 879	2 586	3 368	4 187	14 243
... government	168	356	598	883	1,198	1,545	1,909	6,656
... external	-45	-46	-15	22	59	93	129	197
... private	176	381	651	0 973	1 328	1 731	2 149	7,389
optimistic scenario	2490	4,055	6 015	8 506	11 631	15 650	20 579	68 926
... government	746	1 692	2 953	4 629	6 845	9 855	13 898	40,620
... external	1 411	1 649	1 876	2 135	2 418	2 709	2 818	15,016
... private	333	713	1 186	1 742	2 368	3 086	3 863	13,290
pessimistic scenario	-252	-367	0 327	0 911	1 550	2 258	2 998	7 426
... government	-261	-495	-301	-73	179	457	748	253
... external	-165	-249	-16	21	58	91	127	-134
... private	174	377	0 645	0 963	1 314	1 711	2 123	7 307

Table 10 presents the funding gap in 2015, for the WHO normative costs and the MBB medium scenario.

**Table 10: Funding requirements and funding gap for 2015 for each group of countries and under the two financing scenarios (billion US\$)**

2015												
Billion constant US\$ 2005 US\$												
	Sources of additional funding				WHO scenario		MBB Maximum Scenario		MBB Medium Scenario		MBB Minimum Scenario	
	Government	ODA	Private	Total	Cost	Gap	Cost	Gap	Cost	Gap	Cost	Gap
All countries	30	10	7	46	45	-1	58	12	36	-10	19	-28
Optimistic	4	0.5	4	8	45	37	58	50	36	28	19	11
No change	1.32	0.5	4	6	45	39	58	52	36	31	19	13
Pessimistic												
	Sources of additional funding						MBB Maximum Scenario		MBB Medium Scenario		MBB Minimum Scenario	
SSA	Government	ODA	Private	Total	Cost	Gap	Cost	Gap	Cost	Gap	Cost	Gap
Optimistic	16	7	3	26	28	2	43	18	30	4	13	-12
No change	2	0.4	2	4	28	24	43	40	30	26	13	10
Pessimistic	0.6	0.4	2	3	28	25	43	41	30	27	13	11
	Sources of additional funding						MBB Maximum Scenario		MBB Medium Scenario		MBB Minimum Scenario	
Non-SSA	Government	ODA	Private		Cost	Gap	Cost	Gap	Cost	Gap	Cost	Gap
Optimistic	14	3	4	21	17	-3	15	-6	6	-14	5	-15
No change	2	0	2	4	17	13	15	10	6	2	5	1
Pessimistic	0.7	0	2	3	17	14	15	12	6	3	5	2

Table 11 presents a similar funding gap analysis but for the 7-year period from 2009 to 2015.

**Table 11: Funding requirements and funding gap for 2009-2015 for each group of countries and under the two financing scenarios (billion US\$)**

2009-2015												
Billion constant US\$ 2005 US\$												
	Sources of additional funding				WHO scenario		MBB Maximum Scenario		MBB Medium Scenario		MBB Minimum Scenario	
	Government	ODA	Private	Total	Cost	Gap	Cost	Gap	Cost	Gap	Cost	Gap
All countries	87	51	25	163	251	88	227	64	112	-51	67	-96
Optimistic	12	0.7	14	27	251	225	227	200	112	85	67	41
No change	0.03	-0.6	14	13	251	238	227	214	112	99	67	54
	Sources of additional funding						MBB Maximum Scenario		MBB Medium Scenario		MBB Minimum Scenario	
SSA	Government	ODA	Private	Total	Cost	Gap	Cost	Gap	Cost	Gap	Cost	Gap
Optimistic	46	36	12	94	151	57	172	78	89	-5	48	-46
No change	6	0.5	6	13	151	138	172	160	89	77	48	36
Pessimistic	-0.2	-0.5	6	6	151	145	172	167	89	84	48	43
	Sources of additional funding						MBB Maximum Scenario		MBB Medium Scenario		MBB Minimum Scenario	
Non-SSA	Government	ODA	Private		Cost	Gap	Cost	Gap	Cost	Gap	Cost	Gap
Optimistic	41	15	13	69	100	31	55	-14	22	-46	19	-50
No change	7	0	7	14	100	86	55	41	22	8	19	5
Pessimistic	0.3	0	7	7	100	93	55	47	22	15	19	12

### 3.3. Additional facilities and health workers

Table 12 shows that almost 97,000 new or renovated facilities would be operating by 2015 according to the WHO normative approach. The large majority (92%) would be health centers. During this period, some 3.5 million additional health workers would be required. The majority of all new positions would be either nurses/midwives (49%) or community health workers (27%).

**Table 12: Additional facilities and health workers, WHO normative scenario**

	Total	%
Health Facilities	96,838	100
Health Centre	88,960	92
District Hospital	6,410	7
Regional Hospital	1,093	1
Additional Health Personnel	3,476,569	100
Physicians	349,953	10
Nurse/Midwives	1,699,107	49
Clinical Officers	233,302	7
Radiology Technicians	47,697	1
Lab Technicians	37,656	1
Pharmacy Aides	20,083	1
Orderlies	75,311	2
Pharmacists	16,317	0.5
Laboratory Technologists	16,317	0.5
Dental Technicians	30,125	1
Community Health Workers	950,701	27

Table 13 describes the additional facilities and health workers under the MBB Maximum scenario and Table 14 the Medium scenario. In the Medium scenario, during the 7-year period more than 160,000 facilities are proposed for construction or rehabilitation. A large majority of the facilities would be health posts (82 percent) and health centers (13 percent). During the same period, over 2.6 million additional health workers would be required. Seven of every ten new positions would be either a community health worker (56 percent), health extension worker (8 percent), or junior nurse (6 percent).

**Table 13: Additional facilities and health workers, MBB maximum scenario**

	Total	%
Health Facilities	202,103	100
Health Post	157,570	78
Health Centre	31,894	16
District Hospital	10,332	5
Regional Hospital	2,307	1
Health Workers	2,933,739	100
Community based health & nutrition promoters	1,599,479	55
Health extension workers	247,224	8
Junior, assistant, assistant midwife nurse (1 year training)	249,092	8
Technicians (lab, x-ray, pharmacy)	166,082	6
Registered nurse/midwives (at least 3 yr training)	237,816	8
Health officer	20,694	1
Physician/MD	41,599	1
Specialist	12,713	0
Administrative staff	359,039	12

**Table 14: Additional facilities and health workers, MBB medium scenario**

	Total	%
Health Facilities	162,978	100
Health Post	134,030	82
Health Centre	20,686	13
District Hospital	6,985	4
Regional Hospital	1,277	1
Health Workers	2,585,894	100
Community based health & nutrition promoters	1,441,929	56
Health extension workers	200,147	8
Junior, assistant, assistant midwife nurse (1 year training)	160,478	6
Technicians (lab, x-ray, pharmacy)	158,790	6
Registered nurse/midwives (at least 3 yr training)	203,013	8
Health officer	23,226	1
Physician/MD	35,879	1
Specialist	6,236	0
Administrative staff	356,195	14

Finally, Table 15 describes the additional facilities and health workers under the MBB Minimum scenario. During this period more than 130,000 facilities would be constructed or rehabilitated. A large majority of the facilities would be health posts (78 percent) and health centers (16 percent). During this period, some 1.3 million additional health workers would be required. More than sixty percent of all new positions would be community health workers (29 percent), health extension workers (13 percent) or junior nurses (14 percent).

**Table 15: Additional facilities and health workers, MBB minimum scenario**

	Total	%
Health Facilities	135,821	100
Health Post	106,104	78
Health Centre	21,521	16
District Hospital	7,095	5
Regional Hospital	1,100	1
Health Workers	1,299,680	100
Community based health & nutrition promoters	372,228	29
Health extension workers	170,561	13
Junior, assistant, assistant midwife nurse (1 year training)	176,222	14
Technicians (lab, x-ray, pharmacy)	116,988	9
Registered nurse/midwives (at least 3 yr training)	167,238	13
Health officer	14,597	1
Physician/MD	29,020	2
Specialist	8,954	1
Administrative staff	243,873	19

### 3.4. Health impact

Both the WHO normative approach and the MBB maximum scenario aim to strengthen all building blocks of health systems to provide universal coverage with a set of essential services which would dramatically improve health outcomes in developing countries, providing basic care for most frequent health ailments. Both encompass the most complete set of interventions including basic care for non-communicable diseases and palliative care for patients with unspecified illnesses. In addition, the MBB Maximum scenario includes substantial water and sanitation investments.

Table 16 provides the impact estimates for WHO and MBB scenarios for the year 2015. It should be noted that the modeling methods to obtain these numbers are not strictly comparable between WHO and MBB estimates, and hence that some differences are due to differing methods of estimation. In addition, as indicated in Annexes 2 and 3, there are differences in the intervention mixes which give rise to differing impacts.

In the WHO Normative scenario, in 2015:

- Nearly 4m child and infant deaths would be averted, and MDG4 would be achieved in 80% of countries
- Over three hundred thousand maternal deaths would be averted in 2015 and MDG5 would be achieved in 45% of the countries
- Nearly 200 000 HIV deaths and 265 000 TB deaths would be averted
- 11m births would be averted and the MDG target for unmet demand for Family Planning would be met in all countries
- 30m children (aged 12-59 months) would be protected from stunting
- there would be 100% access to an improved source of drinking water and sanitation and an additional improvement in the quality of drinking water through household water treatment in 37% of households. MDG 7 would be fully achieved in all countries.

In the MBB Maximum scenario, in 2015:

- 4.7m child and infant deaths would be averted, and MDG4 would be achieved in 86% of countries
- nearly three hundred thousand maternal deaths would be averted in 2015 and MDG5 would be achieved in 55% of the countries
- Nearly 200 000 HIV deaths and 283 000 TB deaths would be averted
- 16m births would be averted and the MDG target for unmet demand for Family Planning would be met in all countries
- 9.9m children (aged 12-23 months) would be protected from stunting.

In the MBB medium scenario, in 2015

- over 4m child and infant deaths would be averted, and MDG4 would be achieved in 82% of countries
- 259 000 maternal deaths would be averted in 2015 and MDG5 would be achieved in 39% of the countries
- Nearly 74 000 HIV deaths and 235 000 TB deaths would be averted
- 11.9m births would be averted and the MDG target for unmet demand for Family Planning would be met in all countries
- 8m children (aged 12-23 months) would be protected from stunting
- there would be an increase of three quarters in access to improved sanitation and improvement in the quality of drinking water through household water treatment in 18% of households. The Sanitation Goal of MDG 7 would be fully achieved in 48 of the 49 countries.

In the MBB minimum scenario, in 2015

- 3.5m child and infant deaths would be averted, and MDG4 would be achieved in 45% of countries
- 200 000 maternal deaths would be averted in 2015 and MDG5 would be achieved in 12% of the countries
- Over 169 000 TB deaths would be averted
- 7m births would be averted and 73% of countries would met the MDG Family Planning target
- 6m children (aged 12-23 months) would be protected from stunting
- there would be an increase of nearly two thirds in access to improved sanitation.

**Table 16: Comparative impact of different scenarios on reaching the health related MDGs (values for year 2015 as compared to a year-specific (1990/2005 ) baseline**

	49 countries							
	WHO - Normative scenario		Maximum		Medium		Minimum	
	Estimate	% countries reaching target	Estimate	% countries reaching target	Estimate	% countries reaching target	Estimate	% countries reaching target
<b>Additional Deaths Averted in 2015</b>								
Under five deaths (including infant and neonatal)	3,940,608		4,778,016		4,288,519		3,522,655	
Newborn deaths (included above in U5 deaths)	1,297,498		1,418,165		1,260,918		1,009,863	
Maternal deaths	321,630		297,273		259,383		200,079	
Malaria deaths in adults	N/A		75,438		63,750		55,914	
Malaria deaths in children (included above in U5 deaths)	832,750							
HIV/AIDS deaths (WHO: adults + children; MBB: adults only)	193,399		192,394		73,574		- 14,190	
Tuberculosis deaths	264,867		283,191		235,127		169,165	
Total number of deaths averted	4,710,000		5,631,434		4,920,353		3,933,623	
Decrease in # births	10,863,730		16,326,543		11,874,492		7,131,992	
Total # stunting prevented (WHO 12-59 Months; MBB:12-23 Months)~	30,070,000		9,938,891		8,332,510		6,190,619	
<b>% progress towards MDG4 and 5 from 1990/95 baselines</b>								
MDG4: U5MR reduction from 1990 by two-thirds		80% (39/49)	80%	86%	72%	82%	67%	45%
MMR reduction from 1990/1995 baseline	63.8% (1)	45% (22/49)	77%	55%	64%	39%	57%	12%
<i>Countries reaching 70% MMR reduction</i>				69%		45%		29%
1 in Lifetime Risk of Dying reduction *			84%	90%	76%	62%	62%	4%
<b>% progress towards MDG1 malnutrition goal since 2005-8 baseline</b>								
Anemia*	N/A	N/A	66%	100%	56%	88%	45%	16%
Reduction of Low Birth weight*	N/A	N/A	42%	24%	36%	0%	30%	0%
Estimated reduction in stunting children 12-23 months	33.71%		29%	0%	20%	0%	15%	0%
Estimated reduction in stunting children 24-59 months	24.18%							
<b>% progress towards MDG4 child survival goal since 2005-8 baseline</b>								
Average % reduction in U5MR *	66%		73%	86%	63%	82%	55%	45%
IMR reduction *			70%		61%		52%	
NNMR reduction *			65%		57%		48%	
<b>% progress towards MDG5 reproductive health goal since 2005-8 baseline</b>								
Average % reduction in MMR *	67.1% (2)		72%	53%	62%	46%	49%	12%
% of total demand for Family Planning Met*	100%		103%	100%	96%	100%	85%	73%
<b>% progress towards MDG6 communicable disease goal since 2005-8 baseline (3)</b>								
Reduction of Malaria Mortality in adults	N/A	N/A	66%	100%	59%	100%	53%	100%
Reduction in Malaria Incidence*	68% (4)		55%	97%	45%	87%	35%	69%
Reduction in AIDS mortality *			25%	2%	15%	0%	9%	0%
Reduction in HIV/AIDS incidence			49%	57%	41%	42%	19%	0%
Change in HIV/AIDS prevalence			1%	12%	12%	26%	0%	2%
Reduction in TB Mortality *			61%	88%	49%	72%	33%	12%
<b>% progress towards MDG7 WASH goal since 2005-8 baseline</b>								
Quality of drinking water increase*	N/A	N/A	38%		18%		2%	
Access to improved sanitation*	N/A	N/A	100%	100%	79%	98%	63%	0%
Access to an improved source of drinking water*	N/A	N/A	100%	100%	0%	0%	0%	0%

Indicators with \* are calculated as a weighted average based on country population for MBB scenarios.

- (1) Country weighted; population weighted is 68.3%
- (2) Country weighted; population weighted is 67.1%
- (3) % of countries column refer to proportion of countries where incidence and/or mortality will be halved by 2015 relative to 2008
- (4) Refers to malaria incidence in children under five.

#### **4. Discussion**

This report is not intended to propose a definite solution but to present decision makers with possible policy options, their viability and their expected outcome. Decision makers have a responsibility to honor their commitments, as well as to make decisions that take into account prevailing conditions. The international commitment to the MDGs and the present global crises present a challenging situation that requires boldness and creativity.

The projected health cost and impacts assume that countries will use the resources well, allocate them efficiently and that no major change will incur in the price of inputs over the period 2009-2015. Overall the cost range presented here is very stable, corresponding to a variation in levels of coverage achieved and specific health system assumptions. There is more uncertainty on the financing projections as they often rely on poor estimates of current and future aid flows. Finally the impact figures are estimates based on modelling which still include large levels of uncertainty on the combined efficacy of interventions.

Results of this exercise show that, without a strong commitment to health, only limited results will be achieved in the health sector by 2015 for these low income countries. Important financing gaps exist, particularly in the case of SSA countries. In the current macroeconomic environment, greater allocations to health from both donors and governments are crucial to compensate for the lower than previously expected economic growth.

## 5. Annexes

### Annex 1: List of countries and classifications

Country	World Bank region code (1)
Afghanistan	SA
Bangladesh	SA
Benin	SSA
Burkina Faso	SSA
Burundi	SSA
Cambodia	EAP
Central African Republic	SSA
Chad	SSA
Comoros	SSA
Côte d'Ivoire	SSA
Democratic People's Republic of Korea	EAP
Democratic Republic of the Congo	SSA
Eritrea	SSA
Ethiopia	SSA
Gambia	SSA
Ghana	SSA
Guinea	SSA
Guinea-Bissau	SSA
Haiti	LAC
Kenya	SSA
Kyrgyzstan	ECA
Lao People's Democratic Republic	EAP
Liberia	SSA
Madagascar	SSA
Malawi	SSA
Mali	SSA
Mauritania	SSA
Mozambique	SSA
Myanmar	EAP
Nepal	SA
Niger	SSA
Nigeria	SSA
Pakistan	SA
Papua New Guinea	EAP
Rwanda	SSA
Sao Tome and Principe	SSA
Senegal	SSA
Sierra Leone	SSA
Solomon Islands	EAP
Somalia	SSA
Tajikistan	ECA
Togo	SSA
Uganda	SSA

United Republic of Tanzania	SSA
Uzbekistan	ECA
Viet Nam	EAP
Yemen	MENA
Zambia	SSA
Zimbabwe	SSA

(1) <http://go.worldbank.org/K2CKM78CC0>

SSA: Sub-Saharan Africa

LAC: Latin America & Caribbean

MENA: Middle East & North Africa

ECA: Europe & Central Asia

SA: South Asia

EAP: East Asia & Pacific

## **Annex 2. List of Direct health Interventions WHO normative approach**

### **Preventive Interventions**

Communication and behaviour change  
Condom promotion and distribution  
Control of tobacco use  
Counselling for improved complementary feeding  
Counselling for promotion of exclusive and continued breastfeeding  
Family planning interventions - Oral Contraceptives (Pill), Injectables, Condom - male and female, Intrauterine Device (IUD), Implant, Sterilization - Female and male  
Harm reduction among intravenous drug users  
HIV prevention among female sex workers  
HIV prevention among male sex workers  
HIV prevention among men who have sex with men  
HIV prevention: Mass media  
Immunizations (all routine immunizations including BCG, DPT, OPV, Hib, pneumo, 2 dose measles, Hib, hep B, yellow fever, rubella, rotavirus, pneumococcus, and meningitis A, and JE for populations at risk)  
Implementation of the international code of marketing of breast milk substitutes  
Insecticidal mosquito nets, long-lasting, or other malaria vector control intervention  
Intermittent preventive therapy for malaria  
Male circumcision  
Newborn care, routine (*Immediate postnatal care, Breastfeeding support, Resuscitation, Small baby care and kangaroo mother care, Care for minor problems, Presumptive sepsis care, Eye prophylaxis, Presumptive treatment for syphilis, Pre-referral care for seriously ill neonate*)  
Post-exposure prophylaxis  
Postnatal care  
Postpartum administration of anti-D immunoglobulin to rhesus-negative women with a rhesus positive foetus  
Postpartum care in the maternity ward, routine (*Examination of the mother, Information and counselling, Recording and reporting, Administration of iron and folate supplements, Administration of vitamin A supplements*)  
Postpartum care, follow-up visit (*Postpartum examination of the mother, Information and counselling on home care, care seeking, Counselling on family planning methods*)  
Postpartum counselling on family planning (*Counselling on family planning methods, Voluntary tubal ligation (female sterilization), Intrauterine device, Combined oral contraceptives, Combined injectables*)  
Prevention and control of malaria epidemics  
Prevention of mother to child transmission of HIV by anti-retroviral prophylaxis and infant feeding counselling  
Salt reduction in processed foods  
Screening all pregnant women for blood group isoimmunization  
Social marketing  
STI management  
Universal salt iodization  
Vitamin A supplementation to children under five, routine  
Voluntary counselling and testing

### **Treatment interventions**

Antibiotic treatment for dysentery  
Anti-retroviral therapy  
Anti-retroviral therapy (+co-trimoxazole preventive therapy) for HIV+ TB patients  
Basic care package for HIV+ people  
Case management of diarrhoea  
Case management of malaria (artemisinin-based combination therapies and rapid diagnostic tests)  
Case management of pneumonia  
Case management of severe malnutrition  
Case-management of neonatal infections  
Co-trimoxazole preventive therapy for HIV+ TB patients  
Diagnostic testing (HIV)  
HIV care and support in TB patients  
HIV surveillance in TB patients tested  
HIV testing and counselling of TB patients  
Home-based care for PLHA  
Isoniazid preventive therapy, following tuberculin skin test  
Isoniazid preventive therapy, no tuberculin skin test  
Management of breathing difficulty

Management of congenital syphilis  
 Management of convulsions  
 Management of mastitis  
 Management of neonatal tetanus  
 Management of postpartum depression  
 Management of severe hypothermia  
 Management of severe jaundice  
 Multidrug-resistant tuberculosis patients treated  
 Nutritional support  
 Palliative care for PLHA  
 Prophylaxis for opportunistic infections  
 Regular deworming  
 Routine offer of counselling and testing  
 Safe abortions/management of abortion complications  
 Sepsis management  
 Severe and complicated malaria, case management  
 Special general care for seriously ill neonate  
 Supporting breastfeeding (maternal stay for baby care)  
 TB smear positive/ negative / extrapulmonary treatment  
 TB screening among PLHA  
 Treatment of bacterial vaginosis or trichomoniasis infection in pregnancy  
 Treatment of chlamydia in pregnancy  
 Treatment of chronic diseases including asthma, cardiovascular disease, mental illness and neglected tropical diseases and symptomatic treatment  
 Treatment of complications during childbirth (*Ultrasound, Promote foetal maturation before preterm delivery, Management of pre-labour rupture of membranes or infection, Management of antepartum haemorrhage, Management of puerperal sepsis, Management of obstructed labour, Management of prolonged labour, Management of foetal distress, Episiotomy, Avoid breech presentation at birth (with external cephalic version), Vaginal breech delivery, Craniotomy or embryotomy, Management of postpartum haemorrhage, Management of perineal infection, Repair of vaginal or perineal tear, Repair of cervical tear, Symphysiotomy*)  
 Treatment of eclampsia  
 Treatment of gonorrhoea in pregnancy  
 Treatment of hookworm infection (Antenatal Care)  
 Treatment of lower urinary tract infection in pregnancy  
 Treatment of measles and measles complications  
 Treatment of moderate anaemia in pregnancy  
 Treatment of opportunistic infections  
 Treatment of severe anaemia  
 Treatment of severe hypertension in pregnancy  
 Treatment of severe pre-eclampsia  
 Treatment of syphilis in pregnancy  
 Treatment of upper urinary tract infection  
 Treatment of upper urinary tract infection in pregnancy  
 Treatment of vaginal candida infection in pregnancy  
 Very small baby care and kangaroo mother care

### **Complicated interventions**

Antenatal care, routine (Assessment of maternal and foetal well-being, Information and counselling, Recording and reporting, Screening for hypertensive disorders of pregnancy (pre-eclampsia), Screening for anaemia, Prevention of anaemia, Specialist care for pregnant women with diabetes, Syphilis testing, Tetanus toxoid immunization)  
 Childbirth care, routine (Initial assessment and recognition of delivery complications, Surveillance and regular monitoring of labour and delivery, Social support throughout labour and delivery, Prevention and control of infections, Assistance during childbirth, Active management of the third stage of labour, Care and support of the mother)

### **Annex 3: List of interventions in MBB**

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#### **Interventions to reduce U5 Mortality**

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##### **Diarrhea**

Antibiotics (diarrhea)  
Breastfeeding, children 6-11 months  
Complementary feeding  
Exclusive breastfeeding 0-5 months  
Oral Rehydration Therapy  
Vitamin A supplement (child)  
Hand washing with soap by mother  
Use of sanitary latrine  
Supply of safe drinking water  
Quality of drinking water  
Multiple Water/Sanitation/Hygiene interventions  
Zinc supplements (child)  
Zinc therapy  
Rotavirus vaccine  
Management of severe dehydration and complicated enteric fevers at referral level

##### **HIV / AIDS**

Condom Use  
Male circumcision  
STI management  
PMTCT (testing and counseling, AZT + sd  
NVP and infant feeding counseling)  
First-line ART for pregnant women with HIV/AIDS  
Cotrimoxazole prophylaxis for children of HIV+ mothers  
ART for children with Aids  
Management of complicated Aids  
Management of first line ART failures

##### **Malaria**

Complementary feeding  
Therapeutic Feeding  
Insecticide Treated Mosquito Nets for under 5 children  
Vitamin A  
Zinc  
Chloroquine for malarial treatment  
Anti malarial combination treatment at PHC level  
Management of complicated malaria at referral level  
Intermittent Presumptive Treatment (IPT) for children

##### **Measles**

Complementary feeding  
Therapeutic Feeding  
Measles immunization  
Vitamin A – supplementation  
Vitamin A - Treatment for measles  
Management of severe measles at referral level

##### **NN Prematurity**

Calcium supplementation in pregnancy  
Detection and management of (pre) eclampsia (Mg Sulphate)  
Additional ANC: detection and treatment of asymptomatic bacteriuria  
Additional intrapartum: antenatal steroids  
Universal skilled maternal and immediate neonatal care  
Community support to LBW  
Universal emergency neonatal care (asphyxia aftercare, management of serious infections, management of the VLBW infant)  
Balanced protein energy supplements for pregnant women

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**Interventions to reduce U5 Mortality**

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Supplementation in pregnancy with multi-micronutrients

**NN Severe infection**

Clean delivery

Community support to LBW

Early Breastfeeding

Universal case management for pneumonia

Intermittent presumptive treatment of malaria (IPT) for pregnant women

Skilled delivery and neonatal care

Detection & treatment of syphilis in pregnancy

Additional intrapartum: antibiotics (PPROM)

Additional emergency newborn care (management of serious infections)

Universal emergency neonatal care (asphyxia aftercare, management of serious infections, management of the VLBW infant)

**NN Tetanus**

Skilled delivery

Tetanus toxoid

Clean delivery

**Asphyxia**

Universal antenatal care (ANC)

Skilled delivery and immediate neonatal care

Resuscitation of asphyctic newborns at birth

Asphyxia aftercare at referral level

Assisted delivery or vacuum extraction at B-EOC level

Caesarian section at C-EOC level

**Pneumonia**

Complementary feeding

Therapeutic Feeding

Breastfeeding for children 0-5 months

Breastfeeding for children 6-11 months

Zinc

Hib immunization

Antibiotics for U5 pneumonia

Management of severe pneumonia at referral level

Pneumococcal immunization

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**Interventions to reduce stunting**

Balanced protein energy supplements for pregnant women

Intermittent preventive treatment (IPTp) for malaria in pregnancy

Supplementation in pregnancy with multi-micronutrients

Complementary feeding

Zinc preventive

Hand washing by mother

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**Interventions to reduce maternal mortality**

Tetanus toxoid

Screening for pre-eclampsia

Screening & treatment of asymptomatic bacteriuria

Normal delivery by skilled attendant

Active management of the third stage of labor

Initial management of post-partum hemorrhage

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Drugs for preventing malaria-related illness in pregnant women and death in the newborn (50)

Treatment of severe pre-eclampsia or eclampsia

Assisted delivery & vacuum extraction at B-EOC level (51)

Management of obstructed labor, breech & fetal distress (OL) at C-EOC level (Caesarian Section)

Referral care for severe post-partum hemorrhage (PPH)

Management of maternal sepsis

MTP / management of complicated abortions

Family planning

Family Planning

iron/folic acid supplements

multi micronutrients

deworming

calcium supplements

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**Interventions to reduce deaths from AIDS, TB and Malaria in adults and during pregnancy**

Cotrimoxazole prophylaxis for adults with HIV/AIDS

ART for adults with Aids

Management of first line ART failures

Management of complicated Aids

DOTS

DOTS retreatment

Treatment of Multi Drug Resistant TB

Artisanate Combination Treatment (ACT)

Management of complicated malaria with second line drugs

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