



## NO MORE MISSED MDG4 OPPORTUNITIES: OPTIMIZING EXISTING HEALTH PLATFORMS FOR CHILD SURVIVAL

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### Child Health Weeks and Days

With fewer than 600 days remaining to the Millennium Development Goal (MDG) deadline, new strategies are needed to accelerate progress to MDG4, which requires a two-thirds reduction in the 1990 child mortality rate by 2015. Despite a halving of child deaths since 1990 and taking into account the impact of the child survival investments in the pipeline, the current rate of decline in child mortality will still not be fast enough to achieve MDG4. As presented in our “Overview of a Proposed Roadmap to Reach MDG4” document<sup>1</sup>, estimates suggest that in 2015, an additional one million child deaths will still need to be prevented over and above the current trajectory to achieve MDG4. While current child survival activities should be sustained in order to ensure that the current trajectory stays on course, there is also a need for new strategies to close the MDG4 achievement gap. This document outlines a “bend the curve” strategy to save the lives of an additional estimated **220,000 children in 2015**, by delivering additional high impact child health interventions through expanding planned outreach activities known as Child Health Weeks and Days in the countries where child deaths are concentrated.

Adding the highest impact child survival interventions into existing health outreach platforms is one of the best tools for rapidly reaching the high and equitable coverage necessary to achieve MDG4. With support from UNICEF, Child Health Weeks and Days are now being regularly implemented by Ministries of Health in many countries. Typically conducted twice yearly, these activities last from one week to one month, and are an important form of community outreach used to deliver a high-impact package of integrated services. Often they provide the only health services to remote, hard to reach communities, and are therefore critical to the achievement of more equity in the delivery of health services to children. In a recent study on Child Health Days (CHDs) in six African countries, it was found that this delivery platform contributed to strengthening routine delivery of several services, resulting in increased measles vaccination coverage and higher and more equitable coverage of interventions such as vitamin A supplementation, deworming, and delivery of insecticide-treated bed nets.<sup>2</sup> CHDs have been used to reach those who are currently unreached by existing platforms with a wide range of interventions, depending on the setting, such as water purification tablets and screening for undernutrition.<sup>3</sup> Because the greatest concentrations of child deaths occur in these hard to reach communities, existing health outreach platforms that are able to deliver services to these children have become an increasingly important strategy for the achievement of MDG4.

Child Health Weeks and Days provide an ideal platform for delivering additional high impact interventions and services with low coverage levels, including:

- oral rehydration salts (ORS) and zinc for diarrhea;
- nutrition interventions such as vitamin A supplements, food supplements for moderately malnourished children, and breastfeeding promotion; and
- vaccines, including tetanus toxoid vaccination for pregnant women and where appropriate, measles, pentavalent, pneumococcal and/or rotavirus vaccines.

To fully maximize the potential of Child Health Weeks to deliver all of these interventions and particularly vaccines, many of which require three doses at regular intervals, countries should consider increasing the number of Child Health Weeks and Days from twice a year to four times a year. For example, nearly 40 percent of all under five deaths in 2012 occurred in just four countries - India, Nigeria, Ethiopia and Uganda – all of which have country-led UNICEF plans for Child Health Week and Day expansion for 2014 and 2015. Ensuring that Child Health Weeks and Days in these countries are expanded to four times a year and deliver the additional interventions outlined above will accelerate child

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<sup>1</sup> Document available here: <http://www.mdghealthenvoy.org/wp-content/uploads/2014/01/Overview-of-a-Proposed-Roadmap-to-Reach-MDG4-Jan2014.pdf>

<sup>2</sup> Oliphant NP, Mason JB, Doherty T, Chopra M, Mann P, Tomlinson M, Nsibandé D, Mebrahtu S. The contribution of child health days to improving coverage of periodic interventions in six African countries. Food and Nutrition Bulletin, September 2010.

<sup>3</sup> Palmer AC, Diaz T, Noordam AC, and Dalmiya N. Evolution of the child health day strategy for the integrated delivery of child health and nutrition services. Food and Nutrition Bulletin, December 2013.



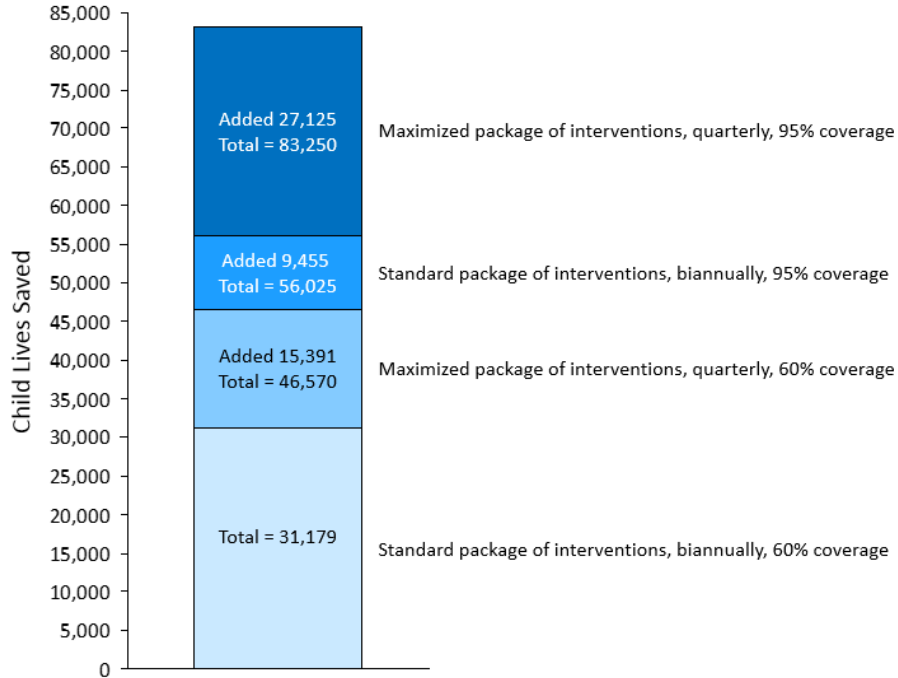
mortality reductions significantly. As child mortality is further concentrated within specific regions within these countries, it will be particularly important to make sure that planned outreach activities are reaching the clusters of the most vulnerable children. This document prioritizes certain “target areas” with the highest numbers of child deaths, shown in detail in Annex I. Other countries with high numbers of child deaths and active Child Health Week campaigns should pursue the same strategy to accelerate their achievement of MDG4.

**Table 1: Currently Planned Child Health Weeks/Days in 2015, Before Scale-Up**

Country	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Ethiopia	✓						✓					
India- Andhra Pradesh	✓						✓					
India- Assam	✓							✓				
India- Bihar						✓						✓
India- Chhattisgarh			✓							✓		
India- Gujarat		✓						✓				
India- Jharkhand		✓					✓					
India- Madhya Pradesh					✓							✓
India-Maharashtra	✓					✓						
India- Odisha					✓						✓	
India- Rajasthan				✓								✓
India- Tamil Nadu			✓						✓			
India- Uttar Pradesh						✓						✓
India- West Bengal					✓							
Nigeria					✓						✓	
Uganda				✓						✓		

Child Health Weeks can have greater impact by increasing coverage, increasing the number of interventions offered, and/or increasing their frequency. Using the target states in Nigeria as an example (Figure 1), it is expected that considerable mortality reductions would occur as Child Health Weeks move from a baseline of providing a “standard” package of interventions at 60% coverage twice yearly, to quarterly delivery of a “maximized” package of those interventions with 95% coverage.<sup>4</sup> Increasing the coverage of the standard package of interventions alone, delivered biannually, would prevent about 80% more deaths. Maximizing the number of interventions provided while maintaining constant coverage levels would avert about 50% more deaths than baseline. Finally, increasing coverage, frequency and providing a maximized package of interventions, as advocated for in this document, would avert about 2.7 times more deaths than the baseline.

<sup>4</sup> Currently, the “standard” mortality-reducing interventions and services provided through RMNCH Weeks in Nigeria are DPT and Hib vaccinations, ORS and zinc provision for diarrhea, vitamin A supplementation, and tetanus toxoid and breastfeeding promotion for pregnant or new mothers. The “maximized” package would include those interventions as well as the rest of the interventions for which this document advocates, include ready-to-use supplementary foods, pneumococcal vaccine, and rotavirus vaccine.



**Figure 1: Child Deaths Prevented through Various RMNCH Week Scenarios in Target States of Nigeria**

If these planned Child Health Weeks and Days in the four countries listed in Table 1 were integrated with the additional high-impact interventions and were expanded to occur four times a year, an estimated additional **220,000 child deaths could be prevented in 2015**. Increasing coverage of these interventions to larger populations of children in these countries or beyond could prevent the deaths of even more children and enable these countries to significantly close their MDG4 achievement gaps.

**Table 2: Children’s Deaths Prevented by Country and Intervention in Target Areas<sup>5</sup>**

Country	All Children Under Five Years						Children Under One Year	Pregnant Women and New Mothers		TOTAL
	ORS and zinc	Vitamin A	RUSF	Pentavalent vaccine (3 doses)	Second dose measles vaccine	Pneumococcal vaccine (3 doses for under 12 months, plus 1-2 catch up for over 12 months)	Rotavirus vaccine (3 doses)	Breast-feeding promotion	Tetanus toxoid vaccine	
Ethiopia	14,000	150	3,000	7,000	2,500	11,500	1,000	2,000	2,000	43,150
India	34,000	1,500	9,000	25,000	6,000	NA	NA	11,000	NA	86,500
Nigeria	29,000	150	4,500	18,500	2,500	21,500	2,000	3,000	2,000	83,150
Uganda	2,000	100	500	2,000	NA	2,500	200	500	NA	7,800
<b>Total</b>	<b>79,000</b>	<b>1,900</b>	<b>17,000</b>	<b>52,500</b>	<b>11,000</b>	<b>35,500</b>	<b>3,200</b>	<b>16,500</b>	<b>4,000</b>	<b>220,600</b>

<sup>5</sup> Anticipated coverage levels for Child Health Events (provided by UNICEF) based on 2014 coverage projections (as 2015 projections are not yet available): Ethiopia: 95%, India: 70%, Nigeria: 95%, Uganda: 80%.



These estimates assume that delivery of these interventions through Child Health Weeks and Days would achieve anticipated coverage levels for the following interventions in 2015:

- **ORS and zinc for children with diarrhea.** ORS and zinc packets can be easily distributed during Child Health Weeks for mothers to take home with them and use when their children fall ill from diarrhea.
- **Vitamin A supplements.** Children should receive two doses per year.
- **Ready-to-Use-Supplementary Food (RUSF) for children assessed as moderately acutely malnourished (MAM).** At a minimum, children should be screened for MAM and severe acute malnutrition (SAM) during Child Health Weeks and Days using a simple MUAC tape, and referred for treatment. Ideally, food supplements or vouchers for local purchase of food should be directly distributed to mothers with children older than six months who are identified as MAM. Doing so will not only directly combat the health and mortality risks associated with MAM, but also improve turnout at health days as there is evidence which shows that food supplements act as an incentive for mothers to approve of and attend child health campaigns.
- **Pentavalent vaccine.** Children between six weeks and a year old should receive three doses in a year, per WHO recommendations.
- **Second dose of measles vaccine.** Children 15-18 months of age should receive their second dose (after first dose at nine months), per WHO recommendations.<sup>6</sup>
- **Pneumococcal vaccine.** Children under 12 months should receive three doses, while unvaccinated children older than 12 months should receive one or two doses as catch-up, per WHO recommendations.<sup>7</sup>
- **Rotavirus vaccine.** Children between six weeks and a year old should receive three doses in a year, per WHO recommendations.<sup>8</sup>
- **Breastfeeding promotion.** Exclusive breastfeeding promotion is recommended as early as possible for mothers with children under six months of age, and complementary feeding messages should be delivered to children from six months onward.<sup>9</sup>
- **Tetanus toxoid vaccination among pregnant women.** Women should ideally receive two doses during each pregnancy, and/or five lifetime doses to best protect newborns.

### Commodity Quantification and Cost

The incremental cost of adding additional services into existing Child Health Weeks and Days is small. The commodity costs are the primary cost driver of additional cost, and the incremental overhead cost is small if not negligible, given the same infrastructure and personnel can be used. The estimated costs for the additional commodities are in the table below. The following assumptions have been made on unit costs per Child Health Week:

- **ORS and zinc:** Quarterly Child Health Weeks would allow for the distribution of an annual supply of 10, 500ml ORS sachets and 4 blister packets of 10, 20mg zinc tablets, which costs about \$3.00 total
- **Vitamin A:** Each dose costs \$0.02, thus an annual cost per child for two doses would be \$0.04
- **Ready-to-Use Supplementary Food:** A 90-day supply of a nutrient dense, lipid based supplement is about \$10.00
- **Pentavalent vaccine:** \$1.20 per dose, thus a 3-dose treatment would cost \$3.60
- **Second dose measles vaccine:** \$0.17 per dose
- **Pneumococcal vaccine:** \$3.50 per dose, thus a 3-dose treatment for children under 12 months would cost \$10.50, and catch-up treatments for children over 12 months would cost \$3.50 or \$7.00 depending on the number of doses provided
- **Rotavirus vaccine:** Each doses is \$3.50, thus a 3-dose treatment for each child would cost \$10.50.
- **Breastfeeding promotion:** the incremental cost of adding awareness raising and education activities to child health weeks targeting mothers is \$1.00 per mother
- **Tetanus toxoid vaccine:** \$0.33 per dose

<sup>6</sup> WHO Weekly Epidemiological Record, No. 35, August 2009.

<sup>7</sup> WHO Weekly Epidemiological Record, No. 14, April 2012.

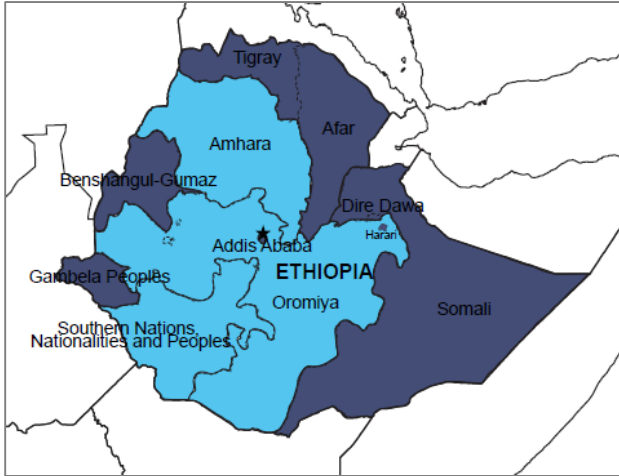
<sup>8</sup> WHO Weekly Epidemiological Record, No. 5, February 2013.

<sup>9</sup> UNICEF, Infant and Young Child Feeding, January 2014.



**Annex I**

**Target areas for the four priority countries**



**Ethiopia**

Child deaths in Ethiopia are concentrated in the following high population, high child mortality rate regions:

- Oromiya
- Amhara
- Southern Nations, Nationalities, and Peoples' Region (SNNPR)



**India**

Sixty percent of child deaths in India are concentrated in the following northern states:

- Uttar Pradesh
- Bihar
- Madhya Pradesh
- Rajasthan



### Nigeria

Half of all child deaths in Nigeria occur in the following states:

- Kano
- Kaduna
- Katsina
- Bauchi
- Jigawa
- Borno
- Sokoto
- Zamfara
- Kebbi
- Adamawa
- Lagos



### Uganda

Child deaths in Uganda are concentrated in the high-population, high child mortality rate Northern and Western regions.