





# Saving the Lives of Children Under Age 5

In commemoration of Mother's Day, Save the Children is publishing its eighth annual State of the World's Mothers report. The focus is on the 28,000 children under age 5 who die every day from easily preventable or treatable causes and the tragic fact that basic, lifesaving remedies still are not reaching millions of mothers and children in need. This report helps to bring attention to low-cost solutions that have the greatest potential to save lives. It also identifies countries that are succeeding in tackling this problem, showing that effective solutions to this challenge are affordable – even in the world's poorest countries.

#### Front cover:

In Mali, 8-month-old Mory is given zinc along with oral rehydration solution to treat diarrhea. "Since his first zinc treatment, Mory stopped feeling sick with the diarrhea," says his mother Assata, 22. "And as you can see, he is healthy and very good looking."

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# Foreword

## CHILD SURVIVAL – A MEASURE OF CIVILIZATION

Michael Manley, former prime minister of Jamaica once said, "Where poverty is shared it may be endured." But there are some things that simply can't be shared, such as the death of a loved one. As Japanese author Kenzaburo Oe, once wrote after the death of a child, "Grief is like a mineshaft narrow and deep. There is no way to make grief horizontal. It cannot be spread sideways."

Each month, almost a million parents lose a child. They don't grieve for only that month. In very real ways that mineshaft of grief lasts for a lifetime. Each year, 10 million couples are added to that backlog of humanity that will never forget a child's death. That is the equivalent of a tsunami with close to 200,000 child deaths each and every week. Yet it doesn't capture our attention because it is spread throughout the world, and is therefore difficult to capture on a television screen. It was the eye contact of the tsunami scenes that made us feel connected and obligated to respond.

These aren't intractable problems. Most of the childhood deaths are preventable, due to measles, diarrhea, malnutrition and a dozen things that we in affluent countries don't even worry about. The real problem is to get us to worry. This report shows how high the risk is to be a child or a mother in many countries. The purpose isn't to condemn countries. Rather, it is to provide a way of measuring improvement, determining where assistance is needed and to show what works so that these efforts can be replicated. We take heart from Nepal and its successes, and then become impatient for every place to have similar success. This is an emergency.

If our ability to share grief is limited, our ability to prevent grief is without limits. Why don't we? Perhaps we feel insulated by geography and time. But then I remember that my grandmother had 10 children and only five survived to go to school. I feel connected to that story. How do I become connected to every story?

That is the challenge: to change the social norm so that we all recognize it is simply wrong for only the few to have access to all of the tools for survival because of where they live. Furthermore, being born in an area with the tools and a system to deliver those tools cannot be separated from the obligation to use those gifts. Once we are convinced that we could have been born in a high-risk country, we have to conclude we are all in this together



and we cheapen our own civilization if we hoard the skills, knowledge and resources. So child survival becomes a measure of civilization not just for the country with high child mortality, but also for countries that could have changed that situation. As Primo Levi once said, "If we know how to prevent torment and don't do it, we become the tormentors."

There is hope. Save the Children shows how everyone reading this report could honor their own mothers by becoming part of that hope for other mothers.

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# Introduction

Every year, our *State of the World's Mothers* report reminds us of the inextricable link between the well-being of mothers and their children. Seventy-five years of experience on the ground have shown us that when mothers have health care, education and economic opportunity, both they and their children have the best chance to survive and thrive.

But what about those who are not surviving? Every day, 28,000 children die before reaching their fifth birthday. Nearly all these deaths occur in developing countries where mothers, children and newborns lack access to basic health-care services. It is especially tragic since most of these deaths could be prevented at a modest cost.

While child mortality rates in the developing world have declined in recent decades, renewed commitment is needed to reach those who have yet to benefit from lowcost, lifesaving services. To address the global challenge of saving mothers' and children's lives, Save the Children is working on five fronts:

**First**, Save the Children is increasing awareness of the challenges and solutions to maternal, newborn and child survival. This report highlights countries that are making real progress – and those that are failing – in saving children's lives. It calls attention to areas where greater investments are needed and shows that effective strategies are working, even in some of the poorest places on Earth.

**Second**, Save the Children is encouraging action by mobilizing citizens and organizations in the United States and around the world to support programs to reduce maternal, newborn and child mortality, and to advocate for increased leadership, commitment and funding for programs we know work.

Third, we are making a difference. Save the Children works in partnership with government agencies and local organizations to deliver high-quality health services throughout the developing world. Working together to vaccinate children, treat diarrhea, pneumonia and malaria, as well as to improve children's nutrition, we have saved millions of children's lives. The tragedy is that so many more could be saved, if only more resources were available to ensure that these lifesaving programs reach all those who need them.

Fourth, we are working to save the lives of babies in the first month of life, who account for close to 40 percent of deaths among children under age 5. Our groundbreaking Saving Newborn Lives program, launched in 2000 with a grant from the Bill & Melinda Gates Foundation, has identified what works to prevent the deaths of those just born and introduced over 20 million women and babies in a dozen countries to the benefits of newborn care. We have trained more than 13,000 health-care providers to promote basic tools and newborn care practices such as vaccines to prevent tetanus, antibiotics to treat infections, a clean razor blade to cut the umbilical cord, immediate and exclusive breastfeeding, and drying and wrapping the baby to keep it warm. The program has recently been expanded to work with partners in 18 countries, focusing on ensuring that even more babies receive needed care, especially during the critical first week of life.

**Finally**, we are striving to make motherhood safer. Throughout the developing world, we work with partners to provide high-quality care during pregnancy, delivery and immediately after birth. We help improve mothers' nutrition. And we provide access to family planning information and services so couples can plan their pregnancies at safe intervals.

Also featured in this year's report is an improved *Mothers' Index* analyzing 140 countries to show where it's best and worst to be a mother and a child. This is our biggest and most comprehensive *Index* ever, using new indicators to more precisely rank countries relative to their level of development.

We count on the world's leaders to take stock of how mothers and children are faring in every country. Investing in this most basic partnership of all – between a mother and her child – is the first and best step in ensuring healthy children, prosperous families and strong communities.

Every one of us has a role to play. Please read the Take Action section of this report, and visit www.savethechildren.org on a regular basis to find out what you can do to make a difference.

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CHARLES F. MACCORMACK President and CEO, Save the Children



# Key Findings and Recommendations

Every year, more than 10 million children die before they reach the age of 5, most from preventable causes and almost all in poor countries. That is roughly half the number of children under age 5 living in the United States.

While there has been significant progress in reducing deaths among children under 5 in recent decades, rates of progress are slowing and in many countries, child death rates are getting worse.

This year's *State of the World's Mothers* report shows which countries are succeeding – and which are failing – to save the lives of mothers and children. It examines how investments in health care and nutrition can make a difference for children, mothers, communities and society as a whole. It also points to proven, low-cost solutions that could save the majority of these young lives.

#### **KEY FINDINGS**

1. An alarming number of countries are failing to make progress in saving children's lives, and in many places the situation is getting worse. Out of 60

developing countries – which together account for 94 percent of child deaths – 20 have either made no progress in reducing deaths among children under age 5, or their rates have worsened in the past 15 years. Our *Child Survival Progress Rankings* identify Iraq, Botswana, Zimbabwe and Swaziland as the countries that are regressing most. In each of these countries, under-5 mortality rates have increased in the last 15 years. In Iraq and Botswana, rates have more than doubled. (*To read more, turn to pages 22-27.*)

2. We know how to save millions of children's lives. The leading causes of death among children under 5 – newborn disorders, pneumonia and diarrhea – are preventable or treatable with low-cost basic interventions. Past successes in reducing child deaths demonstrate clearly that with existing tools and knowledge, we can save more than 6 million of the 10 million children who die every year. Tragically, these solutions are not reaching children who need them most. Our *Report Card on 5 Ways to Save Lives Under Age 5* documents how millions of children in 60 countries still are not being reached with five proven, low-cost solutions that could save their lives: skilled care at childbirth, breastfeeding, measles immunization, oral rehydration therapy for diarrhea and medical care for pneumonia. (*To read more, turn to pages 10-21 and 28-37.*)

3. Child and maternal death rates are highest in the poorest, most disadvantaged places. Nearly all under-5 and maternal deaths occur in the developing world (99 percent). The highest rates are in Africa and South Asia. The majority of child deaths occur in just 10 countries, many with large populations (such as China and India) and others with very high child mortality rates (such as Afghanistan, Angola and Democratic Republic of the Congo). More than 60 percent of the world's maternal deaths occur in these same 10 countries. The highest under-5 mortality rates are seen in countries that have suffered recent armed conflict such as Afghanistan, Liberia and Sierra Leone. Within countries, poor children are more likely to die than their wealthier counterparts. A child in the poorest fifth of a population is more than twice as likely to die compared to a child from the richest fifth. Eliminating health-care coverage inequities - and bringing mortality rates among the poorest 80 percent of the population down to those prevailing among the richest 20 percent - would prevent about 4 million of the 10 million deaths each year. (To read more, turn to pages 13-15.)

### SAVING THE LIVES OF MOTHERS AND CHILDREN: A SNAPSHOT

Each year 10.1 million children die worldwide before reaching the age of 5. That's 28,000 children a day.

Despite a 60 percent reduction in under-5 mortality rates between 1960 and 2000, progress has dramatically slowed or been reversed in many countries.

Almost one death in every five in the world is the death of a child under the age of 5.

Every minute, a woman meets her death during pregnancy or childbirth.

Every year, 2 million newborn babies die on the day they are born.

Nearly all child and maternal deaths (99 percent) occur in developing countries where mothers and children lack access to basic health-care services.

The biggest killers of children worldwide are newborn complications, pneumonia, diarrhea and malaria.

Using existing tools and knowledge, we could save more than 6 million of the 10 million children who die every year from easily preventable or treatable causes.

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**Source:** Map concept adapted from USAID, 2 Decades of Progress: USAID's Child Survival and Maternal Health Program (draft, forthcoming). Global under-5 deaths: UNICEF, State of the World's Children 2007. Child population by age group (0 to 4) of U.S. states, U.S. Census Bureau estimates for 2005: The Annie E. Casey Foundation, KIDS COUNT State Level Data Online, www.kidscount.org.

## 4. Political will matters more than national wealth.

Our *Child Survival Progress Rankings* identify several relatively poor countries that are doing an admirable job of improving the health and saving the lives of children under 5. Egypt, Indonesia, Bangladesh, Nepal and the Philippines have all cut child death rates significantly in the past 15 years. These countries have invested in better health care for mothers, better nutrition for children, and lifesaving health-care services to prevent and treat deadly diseases. A separate analysis of under-5 mortality relative to gross national income found that Malawi, Tanzania, Madagascar, Nepal and Bangladesh are making great strides in child survival despite limited financial resources. *(To read more, turn to pages 16-21 and 22-27.)* 

# 5. Countries that save children's lives also improve their prospects for economic growth and social development. Children who get a healthy start in life are more likely to reach their full potential, with benefits for themselves, their families and society as a whole. Good health and nutrition in the early years help children to develop better mentally, physically and emotionally, and avoid life-long disabilities. Healthier children do better in school and grow up to be more productive adults. When better educated, more prosperous adults have smaller, healthier families, the intergenerational cycle of poverty is broken and all of society is lifted. *(To read more, turn to pages 38-41.)*



#### RECOMMENDATIONS

1. Ensure the well-being of mothers. By improving the overall well-being of mothers, we can ensure healthy mothers give birth to healthy babies, and thus save a significant percentage of mothers' and children's lives. Three key interventions that help both mothers and children to survive and thrive are: nutrition, skilled care during childbirth and access to modern contraceptives. Well-nourished mothers are stronger, have fewer birth complications and healthier babies. Skilled care during childbirth is critical for a safe delivery, and unavailable to too many women. And family planning saves the lives of mothers and babies by enabling women to avoid pregnancy when they are too young or too old, and to space their births at healthy intervals. *(To read more, turn to pages 46-57.)* 

2. Invest in basic, low-cost solutions to save children's lives. The most dangerous threats to children's survival can be fought with relatively simple and inexpensive solutions. Breastfeeding provides nutrition and improves immunity to common, often lifethreatening, illnesses. Immunizations prevent measles and other diseases. Oral rehydration therapy can save a child from dying of dehydrating diarrhea. Antibiotics treat newborn sepsis and pneumonia. Insecticide-treated mosquito nets help prevent malaria. These solutions are not expensive, and it is a tragedy that millions of children who need them do not get them. *(To read more, turn to pages 28-37.)* 

3. Expand the availability of health care to the poorest and most vulnerable mothers and children.

Additional effort is needed to give more parents and health workers in poor communities the knowledge and tools they need to take action and save lives. Childbirth can be much safer if mothers and newborns receive care from trained and skilled health workers before, during and after delivery. Basic newborn care – such as breastfeeding, warming and drying the baby, and delaying bathing – can be provided inexpensively at home if families are made aware of their importance. In remote, hard-to-reach communities, diarrhea and many cases of pneumonia can be treated by trained health workers close to where children live. Mass media, public education campaigns and community mobilization can promote healthy behaviors and raise awareness of threats that require medical attention.



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4. Increase funding and improve strategies to increase the use of basic, lifesaving services we know work. Basic health systems and services in developing countries are grossly under-funded. Health systems need to be strengthened and expanded to reach children who have yet to benefit from lifesaving interventions. To increase access to services, poor countries need new strategies such as community case management linked to local health facilities, and community education and mobilization to encourage family members to adopt lifesaving home-based practices.

5. Increase government support for proven solutions that save the lives of mothers, children and newborns. In order to meet internationally agreed-upon development goals to reduce child deaths and improve mothers' health, lifesaving services must be increased for the women and children who need help most. The United States government should demonstrate leadership toward these goals by passing legislation that would authorize increased resources and require a comprehensive U.S. strategy for improving newborn, child and maternal health. Additional funding should be allocated for this important initiative. Resources should not come at the expense of other accounts critical to the survival and well-being of children, such as family planning, basic education and AIDS. *(To read more, turn to page 44.)* 



#### THE 2007 MOTHERS' INDEX: SWEDEN TOPS LIST, NIGER RANKS LAST, UNITED STATES RANKS 26TH

Save the Children's eighth annual *Mothers' Index* compares the well-being of mothers and children in 140 countries – more than in any previous year. The *Index* has been restructured, with improved indicators to more precisely rank countries relative to their level of development. As a result of these changes, we are now able to calculate rankings for 18 additional industrialized countries.

The Mothers' Index also provides information on an additional 32 countries, 24 of which report sufficient data be included in the *Children's Index* rankings. When these are included, the total comes to 172 countries.

Sweden, Iceland and Norway top the rankings this year. The top 10 countries, in general, attain very high scores for mothers' and children's health, educational and economic status. Niger ranks last among the 140 countries surveyed. The 10 bottom-ranked countries – nine from sub-Saharan Africa – are a reverse image of the top 10, performing poorly on all indicators. The United States places 26th this year, tied with Hungary.

Conditions for mothers and their children in the bottom countries are grim. On average, I in 13 mothers will die from pregnancy-related causes. Nearly I in 5 children dies before his or her fifth birthday, and more than I in 3 children suffer from malnutrition. About 50 percent of the population lacks access to safe water and only 3 girls for every 4 boys are enrolled in primary school.

The gap in availability of maternal and child health services is especially dramatic when comparing Sweden and Niger.

Skilled health personnel are present at virtually every birth in Sweden, while only 16 percent of births are attended in Niger. A typical Swedish woman has almost 17 years of formal education and will live to be 83, 72 percent are using some modern method of contraception, and only one in 150 will see her child die before age 5. At the opposite end of the spectrum, in Niger, a typical woman has less than 3 years of education and will live to be 45. Only 4 percent of women are using modern contraception, and 1 child in 4 dies before age 5. At this rate, every mother is likely to suffer the loss of two children.

Zeroing in on the children's well-being portion of the Mothers' Index, Italy finishes first and Afghanistan ties with Niger for last out of 164 countries. While nearly every Italian child – girl and boy alike – enjoys good health and education, children in Afghanistan face a 1 in 4 risk of dying before age 5. In Afghanistan and Niger, 40 percent of children are malnourished. In Niger, less than 50 percent of children are enrolled in primary school, and only I Afghan girl for every 2 boys is in school. More than half of all children in both countries lack access to safe water.

These statistics go far beyond mere numbers. The human despair and lost opportunities represented in these numbers demand mothers everywhere be given the basic tools they need to break the cycle of poverty and improve their own quality of life as well as that of their children, and generations to come. See the Appendix for the *Complete Mothers' Index and Country Rankings*.



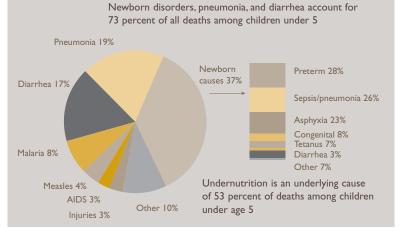
# Reducing the Death Toll: Why 10 Million Children Don't Have to Die Every Year

Twenty-five years ago in 1982, the international health community joined together in a major campaign to reduce infant and child deaths. The "child survival revolution" promoted the use of low-cost basic health-care interventions to prevent and treat the major causes of infant and young child mortality. Throughout the 1980s, with international support, developing countries launched all-out campaigns to treat diarrhea, promote breastfeeding and immunize children against killers such as tuberculosis, diphtheria, whooping cough, tetanus, polio and measles. By the end of the decade, the effort was estimated to have reduced global rates of child mortality by 20 percent<sup>1</sup> and saved the lives of 12 million children.<sup>2</sup>

Much of the momentum behind the child survival revolution has now been lost, and gains achieved in the 1980s and early 1990s have slowed or reversed.<sup>3</sup> Under-5 mortality declined by only 10 percent from the early 1990s to 2000.<sup>4</sup> In the past 15 years, 20 out of 60 developing countries where the vast majority of these deaths occur have either made no progress in reducing under-5 mortality or their rates have worsened.<sup>5</sup> Worldwide each year, more than 10 million children still die before reaching their fifth birthday, nearly 40 percent within their first month.<sup>6</sup> This is roughly half the number of children under age 5 in the United States.<sup>7</sup>

In 2000, world leaders met under the auspices of the United Nations and committed to a two-thirds reduction

### WHY CHILDREN DIE



Source: WHO, Department of Child and Adolescent Health and Development. www.who.int/child-adolescenthealth/OVERVIEW/CHILD\_HEALTH/map\_00-03\_world.jpg. Data are from 2000-2003. in the deaths of children younger than 5 between 1990 and 2015, as one of eight Millennium Development Goals (MDGs).<sup>8</sup> Mid-point assessments of progress have concluded that only seven of the high-priority countries – where 94 percent of child deaths occur – are on track to meet this goal and "tremendous efforts are urgently needed" to achieve the MDG for child survival.<sup>9</sup>

These alarming trends in child mortality – and the human suffering each child's death represents – are reason enough to focus more attention on saving children's lives. But also important is the fact that healthy children are likely to enjoy better health and success later in life. Children who fail to get off to a healthy start in life are less likely to develop their full mental and physical potential, and will be less able in the future to fully contribute to their family, community and society as a whole.

#### WHY CHILDREN DIE NEEDLESSLY

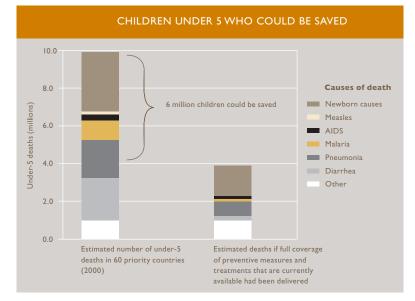
Roughly one death in every 5 in the world is the death of a child under the age of 5. Every day, 28,000 young children still die in the developing world from frequent infection and prolonged undernutrition – causes that are virtually unheard of in the developed world. This is roughly equal to 9 out of 10 children under 5 in San Francisco or three-quarters of children under 5 in Nashville dying in a single day.<sup>10</sup> But we know it is possible to save most of these lives with basic, affordable solutions that any developing nation can afford to implement and which every industrialized nation can afford to support.

Millions of children are still vulnerable to the same causes of death that prevailed more than 25 years ago. The most common killers of children aged 1 to 5 are pneumonia, diarrhea, malaria and vaccine-preventable diseases such as measles.<sup>11</sup> Malnutrition is a contributing factor in over half of these deaths. AIDS is emerging as a major cause of death in some sub-Saharan African countries.12 The greatest risk of death is in the first days and month of life, when 4 million babies die each year, most at home, without contact with a skilled health provider. Three causes - birth asphyxia, prematurity/low birthweight and infection - account for 87 percent of newborn deaths. Recent analysis has shown that nearly 3 million of these newborn deaths could be prevented annually by improving access to basic, cost-effective interventions that are not yet reaching those who need them most.13



Experts agree that past successes in reducing child deaths demonstrate clearly that with existing tools and knowledge, we can save more than 6 million of the 10 million children under age 5 who are still dying each year.<sup>14</sup> In the past two decades, for example, immunization has prevented an estimated 20 million deaths from vaccine-preventable infections.<sup>15</sup> During the 1990s, simple interventions for diarrhea such as oral rehydration therapy contributed annually to saving the lives of 1 million children.<sup>16</sup> And each year, vitamin A supplementation saves over a quarter of a million young lives by reducing the risk and severity of diarrhea and infections.<sup>17</sup>

Despite this good news, many children in developing countries still lack access to these lifesaving services. For example, immunization coverage for diphtheria, whooping cough and tetanus have remained stagnant at 75 percent since the 1990s,<sup>18</sup> and 27 million children – one in every five – are not reached with routine immunizations each year.<sup>19</sup> Lack of access to antibiotics and drugs to treat pneumonia and malaria still results in over 3 million preventable deaths each year.<sup>20</sup>



**Sources:** Number of under-5 deaths: Jones, Gareth, Richard W. Steketee, Robert E. Black, Zulfiqar A. Bhutta, Saul S. Morris and the Bellagio Child Survival Study Group. "How Many Child Deaths Can We Prevent This Year?" *The Lancet*.Vol. 362. July 5, 2003. (Lynhurst Press Ltd.: London), with supplemental data from UNICEF *State of the World's Children 2002*. Estimated deaths prevented from *Lancet*, with supplemental estimates for 21 countries based on *Lancet*, WHO, *World Health Statistics 2006* and WHO, *The World Health Report 2006*.



#### BANGLADESH

Only 35 percent of children suffering from diarrhea receive oral rehydration therapy.<sup>21</sup> And, only 36 percent of all infants are breastfed exclusively for their first six months, despite the cost-effectiveness and proven health benefits to both mother and baby.<sup>22</sup>

The interventions that can save these lives are not expensive. For example, antibiotics to treat pneumonia can cost less than 30 cents.<sup>23</sup> Oral rehydration salts needed to prevent a child from dying of diarrheal dehydration cost less than 50 cents.<sup>24</sup> A one-year dose of vitamin A costs just 4 cents.<sup>25</sup> A long-lasting mosquito net to help prevent malaria costs less than \$5.<sup>26</sup> A child can be immunized against six major childhood diseases for as little as \$17.<sup>27</sup> And providing a recommended package of newborn health interventions would cost only 96 cents per capita.<sup>28</sup>

Earlier global support for the child survival agenda in the 1980s dramatically increased the availability of these measures and saved millions of young lives. But support for child survival programs has not kept pace with increasing needs, and funding for child survival programs by major international donors has been stagnant or declining since the 1990s. Today, diseases such as AIDS and tuberculosis – which have high profiles and vocal activists – are attracting more interest and money from big donors and governments, based partly on the mistaken belief that they kill the most children.

## REDUCING THE DEATH TOLL: WHY 10 MILLION CHILDREN DON'T HAVE TO DIE EVERY YEAR

#### WHERE CHILDREN DIE

At the heart of the child survival problem is a stubborn and widening gap between the health of the world's rich and poor. Virtually all child deaths (99 percent)<sup>29</sup> occur in developing countries in settings of poverty.<sup>30</sup> And the gap in child death rates between the richest and poorest regions of the world has increased in the past decade.

In 1990, the child mortality rate for sub-Saharan Africa was 20 times higher than for industrialized countries. By 2005 the rate was 28 times higher.<sup>31</sup> Sub-Saharan Africa, with only 11 percent of the world's population, accounts for nearly half (48 percent) of all deaths among children under age 5.<sup>32</sup>

A mother in sub-Saharan Africa, for example, is almost 100 times as likely as a mother in an industrialized country to lose her child in the first 5 years of life.<sup>33</sup> Nine out of 10 mothers in sub-Saharan Africa are likely to lose a child during their lifetime<sup>34</sup> – a commonplace but largely untold tale of grief.

The highest under-5 mortality rates are seen in countries with recent wars or civil unrest, such as Afghanistan, Angola, Chad, Democratic Republic of the Congo, Liberia, Sierra Leone and Somalia.

Iraq's under-5 mortality rate is in the middle range when compared to other developing countries, but it has worsened faster than any other country. In 1990, 50 Iraqi children died per 1,000 live births. Today, the rate is 125 per 1,000 births *(for more on Iraq, see page 25).* 

#### WAR CREATES THE BIGGEST THREATS TO CHILDREN'S SURVIVAL

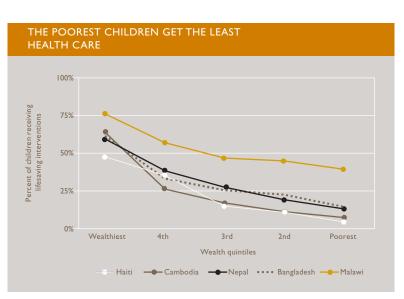
Nine of the 10 countries with the highest under-5 mortality rates in the world are currently experiencing, or emerging from, armed conflict. In **all** of these countries more than 1 child in 5 will die before reaching his or her fifth birthday. In Niger, Afghanistan, Angola and Sierra Leone more than 1 *in* 4 will die.

Under-5 mortality rate (deaths per 1,000 live births)	Country	Conflict
282	Sierra Leone	(1991-2000)
260	Angola	(1975-2002, and ongoing)
257	Afghanistan	(1978 – ongoing)
256	Niger	(1992-1997)
235	Liberia	(1989-2003)
225	Somalia	(1978-2006; ongoing)
218	Mali	(1990-1994)
208	Chad	(1988 – ongoing)
205	DR Congo	(1996 – 2001)
205	Equatorial Guinea	No armed conflicts

#### Sources:

Under-5 mortality rate: UNICEF, *State of the World's Children 2007*. Conflict data: Uppsala Conflict Database: www.pcr.uu.se/database/index.php

# REDUCING THE DEATH TOLL: WHY 10 MILLION CHILDREN DON'T HAVE TO DIE EVERY YEAR



**Source:** Graphic adapted from a presentation by Cesar G.Victoria, 2005. Data source: DHS Surveys. Results show children under 5 who receive at least six out of nine lifesaving child survival interventions (prenatal care, tetanus toxoid immunizations during pregnancy, skilled care at childbirth, measles, BCG and DPT vaccinations, vitamin A, safe water and mosquito nets to prevent malaria).

> Within countries, death rates among the poorest children are higher. A child in the poorest fifth of a population faces a risk of dying that is two-and-a-half times as high compared with a child from the richest fifth.<sup>35</sup> This statistic masks much larger differences in some countries. In Peru, for example, the poorest children face a risk of dying that is more than five times higher than that of the richest children.<sup>36</sup> Among babies in the first month of life (who account for 37 percent of deaths among children under age 5), those born to mothers in the poorest fifth of a population are almost 30 percent more likely to die compared to those in the richest fifth.<sup>37</sup>

Children born to poor mothers in rural areas face great challenges to survival. Babies born in rural areas are 21 percent more likely to die in the first month of life compared to those in urban areas.<sup>38</sup> These babies are often born at home, without any contact with the health system. The mother might be aided at delivery by a neighbor or family member or by no one at all. In sub-Saharan Africa, for example, little more than 40 percent of women deliver with a skilled attendant.<sup>39</sup> This figure is even lower in South Asia, where only 37 percent of births are attended.<sup>40</sup> In many communities in South and Southeast Asia, the birth process is seen as "ritually unclean," so it occurs in relative isolation in a dark, unhygienic part of the home or outlying animal shelter. The newborn is placed on a dirt floor immediately after birth, and breastfeeding is discouraged for several days. The mother and her newborn are often left alone for up to two weeks, with little help from the family, let alone the health system.

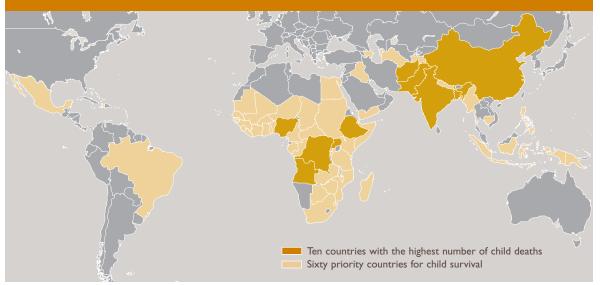
The poorest children are also much more vulnerable to death and disease than other children because of greater exposure to unclean water, poor sanitation, indoor pollution and inadequate housing conditions. They are more likely to be born at a low birthweight, to become malnourished and to contract recurring common diseases. These factors make the poorest children more susceptible to life-threatening infectious diseases.<sup>41</sup>

The poorest children also face greater risks because their parents often lack knowledge of healthy practices and lifesaving services. The poorest mothers and families are the least likely to use the services that can do the most to save them and safeguard their health.

Not surprisingly, the quality of services for the poorest communities is usually inferior to the quality of services for wealthier communities. Staffing, supervising and supplying are more difficult in remote, impoverished areas. Roads may be impassable in certain seasons. And even in settings with better infrastructure, disadvantaged ethnic groups sometimes face unsympathetic or even hostile health providers, which deters them from seeking prompt care.

The lifesaving potential of improving health-care equity for the poorest children and their mothers is far greater than that of any single new technology or combination of technologies that may be introduced now or in the near future. Eliminating health-care coverage inequities – and bringing under-5 death rates among the poorest 80 percent of the population down to those prevailing among the richest 20 percent – would prevent about 40 percent of all under-5 deaths worldwide.<sup>42</sup>

#### MOST CHILD AND MATERNAL DEATHS OCCUR IN JUST 10 COUNTRIES



#### Sources:

Adapted from figure in Jennifer Bryce et al. "Countdown to 2015: Tracking Intervention Coverage for Child Survival." *The Lancet.* Supplemental data from UNICEF. State of the World's Children 2007, Table 1, p.105

> Almost 60 percent of all child deaths (6 million out of 10.1 million each year) occur in just 10 countries. Many of these countries have very large populations (such as China and India) and others have very high child mortality rates (such as Afghanistan, Democratic Republic of the Congo and Nigeria). Six of these countries alone –

India, Nigeria, Congo, Ethiopia, Pakistan and China – account for nearly 50 percent of worldwide deaths among children younger than 5. These are places where mothers are also at high risk of death during pregnancy or childbirth – nearly 60 percent of maternal deaths occur in these same 10 countries.

# COUNTRIES WITH THE HIGHEST NUMBERS OF CHILD DEATHS ALSO HAVE HIGH RATES OF MATERNAL DEATH

Country	Ranking for number of child deaths	Number of child deaths	Ranking for number of maternal deaths	Number of maternal deaths
India	I	1,919,000	I	136,000
Nigeria	2	1,043,000	2	37,000
DR Congo	3	589,000	4	24,000
Ethiopia	4	509,000	4	24,000
Pakistan	5	473,000	3	26,000
China	6	467,000	9	11,000
Afghanistan	7	370,000	7	20,000
Bangladesh	8	274,000	8	16,000
Uganda	9	200,000	12	10,000
Angola	10	199,000	9	11,000

## Sources:

Child deaths: UNICEF. State of the World's Children 2007, Table I; Maternal deaths: World Health Organization, United Nations Children's Fund and United Nations Population Fund, Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA.

6,043,000 child deaths Approximately 60 percent of global total 315,000 maternal deaths Approximately 60 percent of global total



MALAWI

# POVERTY DOES NOT HAVE TO BE A DEATH SENTENCE FOR CHILDREN UNDER 5

A number of relatively poor countries are doing an admirable job of saving children's lives. Political will and effective strategies have a lot more to do with success in child survival than national wealth. This is demonstrated by an analysis of gross national income (GNI) and changes in child mortality rates since 1990 in 54 developing countries. The analysis uses gross national income adjusted for "purchasing power parity" to account for differences in the prices of goods and services in the countries and to more accurately compare standards of living.

The good news: Many poor countries are moving in the right direction when it comes to child survival. There is no "one-size-fits-all" solution for reducing child mortality, but a number of countries are making breakthroughs that are saving children's lives. All these countries still have a long way to go, and international support will be critical if they are to continue to make progress:

MALAWI – one of the world's poorest countries, with a GNI per capita of only \$650 - achieved a remarkable 43 percent decline in under-5 mortality between 1990 and 2005. Malawi has taken a number of steps in recent years to make the health of mothers and children a top priority and to encourage international organizations to help. Presidential-level commitment and government reforms have directed more resources toward basic health care,43 and special efforts are under way to address the chronic shortage of doctors, nurses and skilled health workers by raising salaries and expanding training.44 Malawi is making progress in fighting malaria by distributing insecticide-treated bed nets to protect children from mosquito bites, and by providing preventive malaria treatment to more pregnant women.<sup>45</sup> Malawi also is making strides in saving newborn lives<sup>46</sup> and an effective nationwide effort is fighting malnutrition in children under age 5 (see pages 36 and 37). Malawi still has a long way to go, however. While 57 percent of women deliver their babies in health facilities, the quality of care in these facilities varies greatly<sup>47</sup> and many mothers delivering at home do not receive the essential care needed

## REDUCING THE DEATH TOLL: WHY 10 MILLION CHILDREN DON'T HAVE TO DIE EVERY YEAR

for themselves and their newborn. The lifetime risk of maternal death is 1 in 7, one of the highest globally,48 with underlying causes including early childbearing and high fertility rates. During the critical first month of life, 31 of every 1,000 babies that are born die, and because most of these babies die at home, the real figure is likely higher. According to UNICEF, 48 percent of children under 5 are stunted, 22 percent are underweight or malnourished, and 5 percent are wasted or severely malnourished.<sup>49</sup> Malawi is struggling with a serious HIV problem - 14 percent of deaths under age 5 are caused by AIDS<sup>50</sup> and tragically, 400,000 children under the age of 15 have been orphaned by AIDS.<sup>51</sup> Only 15 percent of children under age 5 sleep under an insecticide-treated bed net.52 And despite renewed political will, only 20 percent of routine vaccinations are financed by the government<sup>53</sup> and expenditure on health is low, at \$5 per capita.54

**TANZANIA** – with a GNI of \$730 – has reduced child mortality by 24 percent and newborn mortality by 20 percent in the last five years.<sup>55</sup> Tanzania's under-5 mortality rate was stagnant in the 1990s,<sup>56</sup> but much progress has been made in recent years as a result of increased government spending on maternal and child health care, health-sector reform and support from international partners.<sup>57</sup> A nationwide effort has focused on providing better care during pregnancy, including: malaria prevention, nutrition counseling, nutritional supplements, and syphilis screening and treatment.58 Nearly 95 percent of children 5 to 59 months of age receive at least one annual vitamin A supplement.<sup>59</sup> While much progress is being made, 172,000 children (nearly 1 in 8) died in Tanzania in 2005 before reaching their fifth birthday.<sup>60</sup> The major causes of under-5 mortality were newborn infections and birth-related complications (27 percent), malaria (23 percent), pneumonia (21 percent) and diarrhea (17 percent).61 In addition, only 43 percent of births<sup>62</sup> are attended by skilled health personnel and 41 percent of infants are breastfed.63 Although Tanzania has one of the highest coverage rates in sub-Saharan Africa, little more than half of all under-fives with diarrhea receive oral rehydration therapy, and less than 60 percent of children with pneumonia ever receive care.64

TANZANIA

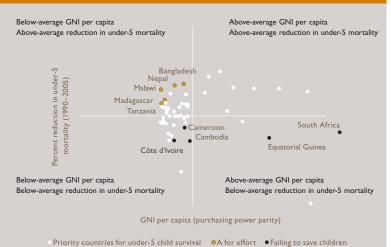


# REDUCING THE DEATH TOLL: WHY 10 MILLION CHILDREN DON'T HAVE TO DIE EVERY YEAR

SAVING THE LIVES OF CHILDREN UNDER 5

MADAGASCAR – with a GNI of \$880 – has reduced child mortality by 29 percent since 1990. Madagascar's success is due largely to a high level of government commitment to improve health services and save children's lives. Immunization rates improved from 62 percent in 2002 to 87 percent in 2005.65 Madagascar has built a well-designed program to prevent malnutrition, which includes extensive promotion of breastfeeding. Malnutrition declined from 42 to 35 percent in community nutrition sites in 2005.66 Still, half of all children under 5 suffer from some degree of malnutrition.<sup>67</sup> And while progress has been achieved in reducing the number of children who die before their fifth birthday, 85,000 children (almost 1 in 8) continue to die each year from preventable causes such as malaria, diarrhea and acute respiratory illnesses.68

### POVERTY DOES NOT HAVE TO BE A DEATH SENTENCE FOR CHILDREN UNDER 5



**Sources:** Percent reduction in under-5 mortality (1990-2005): UNICEF, State of the World's Children 2007, Table 10; GNI per capita (purchasing power parity) US\$ 2005: The World Bank. World Development Report 2007, Table 1. Gridlines represent mean values for 54 of 60 priority countries for which data are available.

**NEPAL** – Despite a GNI of only \$1,530 and a decade of civil conflict, Nepal has cut its under-5 death rate almost in half in the past 15 years. Key to this success has been improving the availability of lifesaving child health measures. For example, in the past 10 years, immunization rates have increased from 43 to 83 percent,<sup>69</sup> and over 95 percent of children 5 to 59 months of age receive at least one annual vitamin A supplement.<sup>70</sup>

An innovative approach called "community case management" has given community health workers and parents the knowledge and tools they need to take action. More than half of Nepal's children under 5 can now be treated for diarrhea and pneumonia close to home - often by a carefully selected and trained female health worker in their own community.<sup>71</sup> This means parents do not have to make long, costly and often dangerous journeys to medical facilities when their children are ill, so they are more likely to seek treatment (and also to seek it earlier, before problems become life-threatening). Nepal's Ministry of Health, in partnership with John Snow International and Save the Children, has recently begun training community health workers to administer antibiotics to treat sepsis in newborns.72 Another key to Nepal's success in saving children's lives has been the increased use of modern contraception to delay and space births at healthy intervals. Over 44 percent of Nepali women now use modern contraceptives - up from 26 percent in 199673 – greatly reducing the number of highrisk pregnancies. But there is more to do. Over half of deaths among children under 5 occur in the first month of life, and over 80 percent of births in Nepal are not attended by skilled personnel, placing both mother and newborn at greater risk of death.74 And nearly half of all children under 5 are underweight for their age.75

BANGLADESH – with a GNI of \$2,090 – has made significant progress in saving the lives of infants and children over the past 15 years. The infant mortality rate (deaths in the first year of life) has been cut 46 percent and the child mortality rate is down 51 percent. In recent decades, Bangladesh has boosted girls' school enrollment rates, improved the quality of education for girls76 and promoted family planning.77 In 2005, Bangladesh was one of only a handful of least developed countries to have achieved gender parity in primary education, where nearly every child, boy and girl alike, was enrolled in primary school.78 Similarly, at 47 percent, Bangladesh has the highest percentage of women using contraception of any least developed country.79 These pioneering efforts have led Bangladeshi couples to choose smaller, healthier families (the average number of births per woman in Bangladesh declined from 6.3 in the early 1970s to 3 today).<sup>80</sup> While much progress is being made, 274,000 Bangladeshi children never see their fifth birthday,<sup>81</sup> and almost half are newborn babies in the first month



of life.<sup>82</sup> To address this problem, the government of Bangladesh, in partnership with Save the Children, launched a major effort in 2001 to identify and address the causes of newborn death and disease. Newborn health has now been integrated into government policy and training curricula for health-care providers. But much more remains to be done. Less than 15 percent of deliveries are attended by skilled health personnel, only about a third of infants are exclusively breastfed for the

The bad news: A number of developing countries – all of them wealthier than Malawi, Tanzania and Madagascar – have worsening or stagnant rates of child mortality. HIV has had a devastating impact on families and health systems in several of these countries (*see page 26* for more about the role of AIDS in under-5 deaths.) Others appear to lack the political will and leadership required to ensure health services reach mothers and children who need them most.



ETHIOPIA

first six months, and only 20 percent seek treatment for suspected pneumonia.<sup>83</sup> In addition, nearly half of all children under 5 are underweight for their age.<sup>84</sup>

Other countries that are performing well in child survival relative to their gross national income include: **ETHIOPIA** (20 percent reduction in child death rates in the past 15 years), **GUINEA-BISSAU** (21 percent), **MOZAMBIQUE** (38 percent), **NIGER** (20 percent), **TAJIKISTAN** (38 percent) and **YEMEN** (27 percent). **SOUTH AFRICA** – with a GNI of \$12,120, more than 18 times higher than that of Malawi – is experiencing an increase in death rates among children due to AIDS. Since 1990, the child mortality rate in South Africa has risen 13 percent, and AIDS is now associated with 57 percent of child deaths.<sup>85</sup> Almost 1 in 3 pregnant women visiting public clinics was living with HIV in 2004.<sup>86</sup> In 2005, an estimated 1.2 million children under the age of 15 had been orphaned by AIDS.<sup>87</sup> Preventing mother-tochild transmission of HIV is critical to saving the lives of children under 5.<sup>88</sup> Still, malnutrition and the classic infectious diseases (such as diarrhea and pneumonia) remain important causes of death among children in South Africa. Comprehensive primary health care could go a long way to prevent these deaths.<sup>89</sup>

# REDUCING THE DEATH TOLL: WHY 10 MILLION CHILDREN DON'T HAVE TO DIE EVERY YEAR

EQUATORIAL GUINEA'S GNI is \$7,580 - almost 12 times higher than that of Malawi - yet in the past 15 years, the country's child mortality rate has risen 21 percent. Equatorial Guinea has experienced rapid economic growth due to the discovery of large offshore oil reserves and, in the last decade, has become sub-Saharan Africa's third-largest oil exporter. Despite the country's economic windfall, there have been few improvements in the health sector or other services for the people.<sup>90</sup> Newborn causes (infections, birth complications and low birthweight) account for 27 percent of deaths to children under age 5. Other major causes are: malaria (24 percent), pneumonia (17 percent) and diarrhea (14 percent).91 In Equatorial Guinea, one-third of all births are not attended by skilled health personnel,<sup>92</sup> 1 in 16 mothers dies from pregnancy-related causes93 and 1 in 5 children will not live to see his or her fifth birthday. Only 1 in 4 children is exclusively breastfed until six months of age.94 Few more than 1 in 3 ever receive life-saving oral rehydration therapy and only half are immunized against measles.95

CAMBODIA – with a GNI of \$2,490 – has seen a 24 percent increase in its child death rate in the last 15 years. Cambodia has the highest under-5 mortality rate in the East Asia and Pacific region. Some 61,000 Cambodian children died in 2005 before reaching their fifth birthday.96 Vaccine-preventable diseases, diarrhea and respiratory infections are among the leading causes of childhood death.97 Few more than 1 in 3 children with pneumonia are ever taken to a health-care provider and only 12 percent of Cambodian children are exclusively breastfed for their first six months of life. 98 Malnutrition is common among Cambodian children – 45 percent are moderately or severely underweight.99 Maternal mortality is also high - only 32 percent of births in Cambodia are attended by skilled personnel and 1 in 36 mothers will die from a pregnancy-related cause.<sup>100</sup>

**CAMEROON** – with a GNI of \$2,150 – has seen a 7 percent increase in its child death rate in the last 15 years. Some 51 percent of Cameroon's people live below the poverty line<sup>101</sup> and 32 percent of children have stunted growth because of malnutrition.<sup>102</sup> Newborn causes account for 25 percent of deaths in children under age 5. Other major causes are: malaria (23 percent), pneumonia (22 percent) and diarrhea (17 percent).<sup>103</sup> Only 13 percent of women use modern contraception.<sup>104</sup> One in 23 mothers dies from a pregnancy-related cause and 1 in 7 children never reaches age 5. And despite its proven effectiveness in protecting children from contracting malaria, only 1 percent of children under 5 sleep under an insecticide-treated mosquito net.<sup>105</sup>

CÔTE D'IVOIRE – with a GNI of \$1,490 – has seen a 24 percent increase in its child death rate, due in part to armed conflict that has disrupted health services and forced thousands to flee their homes. Malaria, diarrhea and respiratory infections are the deadliest threats to children.<sup>106</sup> Acute malnutrition among children is increasing.<sup>107</sup> Only 5 percent of infants are exclusively breastfed.<sup>108</sup> Only 1 in 3 children with diarrhea receives treatment. Fewer than 40 percent of children with pneumonia are taken to a health-care professional, and only 50 percent of children under age 1 are fully immunized against the major vaccine-preventable diseases.<sup>109</sup> Only 4 percent of children under 5 sleep under an insecticide-treated mosquito net.110 Some 130,000 children (nearly 1 in 5) die before their fifth birthday.<sup>111</sup> Mothers fare little better - only 7 percent use modern contraception <sup>112</sup> and 1 mother in 25 will not live through her pregnancies.113

Other countries that are not saving children's lives at the rate one might expect – considering their relatively high national income and what other less wealthy countries have accomplished – include: **ANGOLA** (child death rates have shown no improvement in 15 years), **BOTSWANA** (death rate increased by 107 percent due to one of the highest rates of HIV infection in the world), **GABON** (rate has decreased only 1 percent), **SWAZILAND** (rate has increased by 45 percent, due mostly to AIDS) and **ZIMBABWE** (rate has increased by 65 percent). (*See page 25 for more about Swaziland and Zimbabwe.*)

# Child Survival Progress Rankings

Save the Children examined those countries making the most progress in saving the lives of children under age 5, those failing to make progress, and those with worse child death rates today than 15 years ago. The 60 countries in our *Child Survival Progress Rankings* account for 94 percent of the deaths among children under age 5. Forty of these countries have made some progress since 1990, and a few have made truly remarkable gains. But 20 countries have either made no progress at all or now have higher child mortality rates than they did before.

The top five countries below are all are on track to meet Millennium Development Goal 4 (reducing under-5 mortality by two-thirds between 1990 and 2015). None of these countries is wealthy, but all have recognized that when children survive and thrive, the impact on their country is positive and far-reaching. Each has taken a different path toward success, but all have invested in improvements at the national, community and family level to save children's lives.

The bottom five countries are all moving backward. More children are dying in these countries now than in 1990 – in some cases, many more children. In several cases, AIDS is responsible for the increase in child mortality. It should be noted, however, that globally, AIDS is the cause of only 3 percent of deaths among young children.<sup>114</sup> Easily preventable or treatable causes like pneumonia, diarrhea and infections are still the major killers of newborns and children under age 5.<sup>115</sup>

## TOP FIVE COUNTRIES – MAKING GOOD PROGRESS IN SAVING CHILDREN'S LIVES

**EGYPT** has a great success story to tell, having achieved an impressive 68 percent reduction in child deaths in the past 15 years. Since hosting the International Conference on Population and Development in 1994, Egypt has been committed to investments in the health of mothers and children. The country has aimed to reduce the fertility rate, reduce the maternal mortality rate and improve pregnancy outcomes. Since 1990, use of contraceptives has increased to nearly 60 percent,<sup>116</sup> and the fertility rate has slowly declined from 4.3 to 3.1 births per woman.<sup>117</sup> More births (74 percent) are now assisted by skilled personnel, and more mothers, babies and children are surviving. Between 1990 and 2005, Egypt cut its infant mortality rate (deaths in the first year of life) by 63 percent.<sup>118</sup> And between 1995 and 2006, the country lowered its newborn mortality rate (deaths in the first month of life) by a third.<sup>119</sup> In 1992, John Snow International, in collaboration with Egypt's Ministry of Health and Population and the U.S. Agency for International Development (USAID), launched a major "healthy mother, healthy child" initiative targeting the areas of Upper Egypt that had the worst health conditions. The effort focused on improving care for pregnant women, and providing skilled assistance during childbirth and access to family planning information and services. Between 1992 and 2000, Egypt cut its overall maternal mortality rate by 52 percent, with a 59 percent decline in Upper Egypt compared to a 30 percent decline in Lower Egypt.<sup>120</sup>

**INDONESIA** also has made noteworthy progress, achieving a 60 percent reduction in its under-5 death rate in the last 15 years. With support from international donors, Indonesia made substantial investments in public health in recent years. Around 90 percent of Indonesian families live within easy reach of primary health care.121 Oral rehydration therapy, which is promoted through health education and mass media campaigns,122 is received by 56 percent of children with diarrhea.123 Immunization rates are between 70 to 88 percent,<sup>124</sup> but rates are dropping, not improving. In 1988, a "safe motherhood" initiative trained and placed 55,000 midwives in villages (out of an estimated 60,000 villages nationwide).<sup>125</sup> In addition, a vigorous national family planning program has helped cut fertility rates in half.126 Today, 92 percent of pregnant women receive prenatal care, 72 percent of births are attended by skilled health personnel127 and newborn mortality is relatively low (18 per 1,000 live births).<sup>128</sup>





SAVE THE CHILDREN

## CHILD SURVIVAL PROGRESS RANKINGS



NEPAL

**BANGLADESH** has achieved a remarkable 51 percent reduction in child mortality since 1990, especially given the country's meager national income *(see pages 18-20 for more about Bangladesh.)* 

**NEPAL**, an even poorer country than Bangladesh, is making steady gains in saving children's lives, with a 49 percent reduction in child mortality in the last 15 years (*see page 18 for more about Nepal.*)

The **PHILIPPINES** also made good progress, achieving a 47 percent reduction in its under-5 death rate in the last 15 years. The Philippine government has taken a number of steps to encourage families and communities to take more responsibility for the well-being of children. Their efforts have been bolstered by active and engaged citizens at the grassroots level.<sup>129</sup> With support from USAID, the Philippine Department of Health launched a number of initiatives in 1989 promoting immunizations to prevent disease, oral rehydration therapy to fight diarrhea, and breastfeeding to increase newborn survival and improve nutrition.<sup>130</sup> Today more than three-quarters of children with diarrhea receive oral rehydration therapy.<sup>131</sup> Among developing countries, the Philippines has one of the highest percentages of births assisted by trained personnel (60 percent) and one of the lowest newborn mortality rates (15 per 1,000 live births).<sup>132</sup>

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## BOTTOM FIVE COUNTRIES – WHERE MORE CHILDREN ARE DYING NOW THAN BEFORE

IRAQ's child mortality rate has increased by a staggering 150 percent since 1990, more than any other country. Even before the latest war, Iraqi mothers and children were facing a grave humanitarian crisis caused by years of repression, conflict and external sanctions. Since 2003, electricity shortages, insufficient clean water, deteriorating health services and soaring inflation have worsened already difficult living conditions. Some 122,000 Iraqi children (1 in 8) died in 2005 before reaching their fifth birthday.133 More than half of these deaths were among newborn babies in the first month of life. Pneumonia and diarrhea are the other two major killers of children in Iraq, together accounting for over 30 percent of child deaths.<sup>134</sup> Only 35 percent of Iraqi children are fully immunized, and more than one-fifth (21 percent) are severely or moderately stunted.<sup>135</sup> Conservative estimates place increases in infant mortality following the 2003 invasion of Iraq at 37 percent.136

**BOTSWANA**'s child mortality rate has more than doubled, increasing by an alarming107 percent in the past 15 years – from 58 per 1,000 births in 1990 to 120 per 1,000 in 2005. Roughly 1 child in 8 in Botswana does not make it to age 5.

ZIMBABWE's child mortality rate has increased by 65 percent since 1990, due largely to AIDS. Some 51,000 children in Zimbabwe (1 in 8) died in 2005 before reaching their fifth birthday,137 with AIDS causing 41 percent of those deaths.138 Zimbabwe declared prevention of mother-to-child transmission of HIV a national priority in 2001 and embarked on a rapid expansion of services to care for HIV-infected mothers and their babies.<sup>139</sup> One in 5 Zimbabwean children (an estimated 1.3 million) is an orphan, and nearly 2 out of 3 are not in secondary school<sup>140</sup> because they cannot afford school fees and uniforms.141 Zimbabwe's economy has been in a freefall since 1997, and inflation is at a world high of 1,200 percent.<sup>142</sup> The health-care system is in crisis due to shortages of money to pay for drugs and equipment, lack of investment in infrastructure, and qualified health workers leaving for more lucrative jobs overseas.<sup>143</sup> Other major killers of children in Zimbabwe are newborn infections and birth-related complications (28 percent), pneumonia (15 percent) and diarrhea (12 percent).144 Zimbabwe is doing well in providing some child survival

interventions – 85 percent of infants are immunized against measles and 80 percent of under-fives with diarrhea receive treatment. Yet only half of children with pneumonia are taken to an appropriate health-care provider,<sup>145</sup> and only a third of infants are breastfed, despite its preventive and therapeutic value, even to children of HIV-positive mothers.<sup>146</sup> In Zimbabwe, mothers fare little better: 1 in 16 mothers in Zimbabwe will die of pregnancy-related causes.<sup>147</sup>

**SWAZILAND**'s child mortality rate has increased by 45 percent in the past 15 years. Swaziland has the world's highest HIV-infection rate <sup>148</sup> and AIDS is the cause of 47 percent of deaths among children under age 5.<sup>149</sup> It is estimated that 63,000 children in Swaziland have been orphaned by AIDS and that number is expected to reach 120,000 by 2010.<sup>150</sup> More than two-thirds of Swaziland's 1.2 million people live on less than a dollar a day.<sup>151</sup> School dropout rates are increasing because of poverty and the impact of AIDS.<sup>152</sup> Other major killers of children in Swaziland are newborn infections and birth-related complications (27 percent), pneumonia (12 percent) and diarrhea (10 percent).<sup>153</sup>

CAMBODIA, CÔTE D'IVOIRE and KENYA are tied for fifth-from-last place in the Progress Rankings. Each country has suffered a 24 percent increase in child mortality since 1990. Some 163,000 children (roughly 1 in 8) died in Kenya in 2005 before reaching their fifth birthday.<sup>154</sup> Nearly a quarter of these deaths were among newborn babies in the first month of life.<sup>155</sup> Other major killers of children in Kenya are: pneumonia (20 percent), diarrhea (16 percent), malaria (14 percent) and AIDS (15 percent).<sup>156</sup> Most women (58 percent) give birth at home without a skilled person to help, and the percentage of unassisted births is closer to 80 percent among the poorest mothers.<sup>157</sup> Kenya is vulnerable to drought and food shortages, and in some districts a quarter of the children are acutely malnourished.<sup>158</sup> Proper nutrition begins with mother's milk, yet only 13 percent of infants in Kenya are exclusively breastfed for their first six months of life.159 Moreover, only 1 in 3 children with diarrhea receives oral rehydration therapy, and less than 50 percent of children sick with pneumonia ever receive care, let alone treatment.<sup>160</sup> And despite the lifesaving potential of insecticide-treated nets, less than 5 percent of children sleep under treated bed nets.<sup>161</sup> (For more about Cambodia and Côte d'Ivoire, see page 21.)

## CHILD SURVIVAL PROGRESS RANKINGS



# GRIM STATISTICS FOR MOTHERS AND CHILDREN

Twenty of the 60 countries (30 percent) have made little or no progress in terms of child survival. In these countries, more children are dying today – both in relative terms and in most cases absolute numbers – than were dying in 1990. In 15 of the 60 countries (25 percent), under-5 mortality rates have risen, in many cases significantly so, with mortality rates climbing from 15 to 150 percent.

In 9 of the 60 countries, more children are dying now than were dying in 1980, before the dawn of the "child survival revolution."<sup>162</sup> In many of these countries, given rates of under-5 mortality and fertility, a mother today is more likely to lose a child than her own mother was 25 years ago. And in some sub-Saharan African countries, such as Rwanda, where under-5 mortality has not changed significantly since the 1960s, a mother today is more likely to lose a child than her grandmother was.<sup>163</sup>

In 17 of the 60 countries – statistically speaking – every mother is likely to suffer the loss of a child due to a largely preventable cause. In these countries, the rate of child deaths (stated as "1 in x") matches or exceeds the fertility rate (estimated number of children born per woman). SIERRA LEONE

In Angola, Burkina Faso, Burundi, Chad, Democratic Republic of the Congo, Equatorial Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Rwanda, Sierra Leone, Somalia, Uganda and Zambia, on average, all mothers are likely to lose a child. And in Afghanistan and Niger, every mother is likely to lose two children.<sup>164</sup>

#### AIDS AND CHILD MORTALITY

Although AIDS is associated with relatively few (3 percent) child deaths globally, the percentage of deaths due to this disease in several Southern African countries is high, ranging from 47 to 57 percent.

Because AIDS lacks a cure, and many lack access to ageappropriate antiretroviral treatment, affected children will die due to complications of the disease at a young age. But many die sooner than necessary because of increased susceptibility to infections. In fact, most children with HIV or AIDS die of pneumonia or diarrhea, and often these cases are treatable with existing interventions.

The AIDS epidemic has led to an under-counting of the child deaths due to pneumonia and diarrhea. Because death certificates contain only one diagnosis per child, children with HIV or AIDS who die of pneumonia or diarrhea often have AIDS listed as their cause of death.

#### CHILD SURVIVAL PROGRESS RANKINGS

	Under-5 mortality rate (per 1,000 live births)	Percent change since 1990	U5MR progress	
			rank	
Egypt	104 33	68	I	
ndonesia	91 36	60	2	
Bangladesh	149 73	51	3	
Vepal	145 74	49	4	
Philippines	62 33	47	5	
Brazil	60 33	45	6	
China	49 27	45	6	
	221 125	43		
Malawi			8	
Mexico	46 27	41	9	
ndia	123 74	40	10	
Guinea	240 150	38	11	
Mozambique	235 145	38	11	
Tajikistan	115 71	38	11	
Madagascar	168 119	29	14	
Yemen	139 102	27	15	
Sudan	120 90	25	16	
Djibouti	175 133	23	17	
,				
Pakistan	130 99	24	17	
Tanzania, United Rep. of	161 122	24	17	
Guinea-Bissau	253 200	21	20	
Papua New Guinea	94 74	21	20	
Ethiopia	204 164	20	22	
Haiti	150 120	20	22	
Niger	320 256	20	22	
Benin	185 150	19	25	
Myanmar	130 105	19	25	
,	230 194	16	27	
Nigeria				
Azerbaijan	105 89	15	28	
Uganda	160 136	15	28	
Mali	250 218	13	30	
Burkina Faso	210 191	9	31	
Gambia	151 137	9	31	
Тодо	152 139	9	31	
Ghana	122 112	8	34	
Senegal	148 136	8	34	
Sierra Leone	302 282	7	36	
Mauritania	133 125	6	37	
	110 108	2	38	
Congo				
Afghanistan	260 257	1	39	
Gabon	92 91	I	39	
Angola	260 260	0	41	
Burundi	190 190	0	41	
Congo, Dem. Rep. of the	205 205	0	41	
Liberia	235 235	0	41	
Somalia	225 225	0	41	
Zambia	180 182	-1	46	
Chad	201 208	-3	47	
Cameroon	139 149	-7	48	
Turkmenistan	97 104	-7	48	
South Africa	60 68	-13	50	
Central African Republic	168 193	-15	51	
Rwanda	173 203	-17	52	
Equatorial Guinea	170 205	-21	53	
Cambodia	115 143	-24	54	
Côte d'Ivoire	157 195	-24	54	
Kenya	97 120	-24	54	
'			57	
Swaziland Zinchahara	110 160	-45		
Zimbabwe	80 132	-65	58	
Botswana	58 120	-107	59	
Iraq	50 125	-150	60	

Source: UNICEF. State of the World's Children 2007. Table 10

Progress rankings are of the 60 countries with the world's highest numbers or rates of child mortality. These countries account for 94 percent of the deaths among children under age 5. Rankings are based on the percentage change in mortality rates from 1990 to 2005.

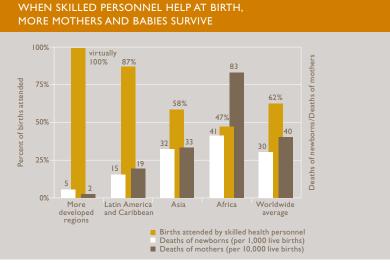
# Saving the Lives of Children Under 5: Low-Cost Solutions That Work

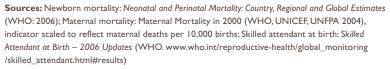
Here's a look at five key solutions that have great potential to save children's lives. Save the Children measured the extent to which 60 developing countries – which account for 94 percent of deaths under age 5<sup>165</sup> – are investing in these solutions.

These five interventions address five of the most dangerous threats to children's survival: newborn disorders, malnutrition, pneumonia, diarrhea and measles. Effective tools to fight these killers are not expensive. Yet millions of children are still dying because they are not being reached with these proven, lifesaving solutions.

## **5 WAYS TO SAVE LIVES UNDER AGE 5**

**Skilled care during childbirth** – Every year, 60 million mothers in the developing world give birth at home with no professional care whatsoever,<sup>166</sup> and 4 million newborn babies die in the first month of life.<sup>167</sup> Most of these deaths are preventable. Sophisticated technology is not what is needed. Doctors, nurses and midwives can easily acquire the skills to provide a safe delivery in routine situations, and to address common complications such as obstructed labor and newborn asphyxia.<sup>168</sup> In settings where skilled care providers are not yet available, alternative health-care workers can be trained to provide a clean delivery, ensure the newborn is dried and kept warm and recognize danger signs indicating the need for additional care.





**Breastfeeding** – Promoting exclusive breastfeeding for the first six months of an infant's life can reduce malnutrition, improve growth and save lives. Breastfeeding provides nutrients, warmth and stronger immunity for babies. It also provides health benefits to the mother and promotes bonding. It costs no money for a mother to breastfeed her infant, but worldwide almost two-thirds of babies are not exclusively breastfed,<sup>169</sup> so education is needed to promote this lifesaving practice. It is estimated that 1 million newborn lives could be saved each year if mothers learn simple care practices such as immediate and exclusive breastfeeding, hygiene and warmth for the baby.<sup>170</sup>

Measles immunization – Measles is among the top five killers of children in developing countries.<sup>171</sup> Causing more than 400,000 deaths every year, measles is responsible for 4 percent of the worldwide deaths of young children annually and is the world's leading cause of childhood vaccine-preventable death. As one of the most highly contagious diseases known, measles can spread quickly within a household or urban community, causing permanent disabilities for many of its survivors, including blindness, hearing impairment, brain damage and other deadly complications such as pneumonia. At around 15 cents per dose, measles vaccination is probably the most cost-effective public health tool available.<sup>172</sup>

**Oral rehydration therapy** – Diarrhea kills 1.8 million children under 5 each year. That's nearly 5,000 young children every day.<sup>173</sup> The oral rehydration salts needed to prevent a child from dying of diarrheal dehydration cost less than 50 cents.<sup>174</sup> This simplest of solutions is estimated to have saved 40 million children's lives since it was first put to the test during a cholera outbreak in India in 1971.<sup>175</sup> Yet it remains tragically underused. Worldwide, only 35 percent of children with diarrhea receive oral rehydration therapy.<sup>176</sup>

**Pneumonia care** – Pneumonia kills more children than any other illness – more than AIDS, malaria and measles combined.<sup>177</sup> Up to 3 million children die from pneumonia each year, accounting for as many as one-third (29 percent) of under-5 deaths worldwide.<sup>178</sup> Antibiotics to treat pneumonia can cost less than 30 cents.<sup>179</sup> Yet it is estimated that only 20 percent of caregivers know the danger signs of pneumonia; only about half of the children who are sick with pneumonia receive appropriate medical care, and less than 20 percent of children with pneumonia receive the recommended antibiotics.<sup>180</sup>



# REPORT CARD: 5 WAYS TO SAVE LIVES UNDER AGE 5

		Low-cost s	olutions to sa	ve children			Progress	in saving lives	
				Percent of	Percent of				
	Percent of	Percent of	Percent of	under-fives	under-fives	Und	er-5	Percent	
	births	children		with diarrhea	with suspected	mortali	ty rate	change in	
Country	attended by	exclusively	I-year-olds	receiving oral	, pneumonia	(per 1,000	, live births)	under-5	Progres
	skilled health	breastfed	immunized	rehydration	taken to a	(pe,		mortality	rank
			against measles	, ,		1000	2005	, ,	
	personnel	(<6 months)		and continued feeding	health-care provider	1990	2005	(1990-2005)	
gypt	74	38	98	29	73	104	33	68	<u> </u>
ndonesia	72	40	72	56 52	61	91	36	60	2
Bangladesh	13	36	81	43	20	149	73	51	3
Nepal	11	68	74		26	145	74	49	<u>4</u> 5
Philippines	60	34	80	76	55	62	33	47	
Brazil	97	-	99	28	46	60	33	45	6
China	97	51	86	-	-	49	27	45	6
Malawi	56	53	82	51	27	221	125	43	8
Mexico	83	-	96	-	-	46	27	41	9
ndia	43	37	58	22	67	123	74	40	10
Tajikistan	71	41	84	29	51	115	71	38	
1ozambique	48	30	77	47	54	235	145	38	
Guinea	56	27	59	44	33	240	150	38	
Madagascar	51	67	59	47	48	168	119	29	14
ſemen	27	12	76	23	47	139	102	27	15
Sudan	87	16	60	38	57	120	90	25	16
Tanzania, United Rep. of	43	41	91	53	59	161	122	24	17
Djibouti	61	-	65	-	-	175	133	24	17
Pakistan	31	16	78	33	66	130	99	24	17
Papua New Guinea	41	59	60	-	75	94	74	21	20
Guinea-Bissau	35	37	80	23	64	253	200	21	20
Haiti	24	24	54	41	26	150	120	20	22
Ethiopia	6	49	59	38	16	204	164	20	22
Viger	16	I	83	43	27	320	256	20	22
	57	15	72	48	66	130	105	19	25
Benin	66	38	85	42	35	185	150	19	25
Nigeria	35	17	35	28	33	230	194	16	27
Azerbaijan	88	7	98	40	36	105	89	15	28
Jganda	39	63	86	29	67	160	136	15	28
Mali	41	25	86	45	36	250	218	13	30
Gambia	55	26	84	38	75	151	137	9	31
Burkina Faso	38	19	84	47	36	210	191	9	31
Годо	61	18	70	25	30	152	139	9	31
Ghana	47	53	83	40	44	122	112	8	34
Senegal	58	34	74	33	27	148	136	8	34
Sierra Leone	42	4	67	39	50	302	282	7	36
Mauritania	57	20	61	28	41	133	125	6	37
Congo	86	19	56		וד –	133	123	2	37
Gabon	86	6	55	44	- 48	92	91	2	30
Japon Afghanistan	14		64	44	28	260	257		39
Liberia	51	35	94	-	70	235	237	0	41
Burundi	25	62	75		40	190	190	0	41
Congo, Dem. Rep. of the	61	24	75	16	36	205	205	0	41
			45	32				0	
Angola	45 25	9	35	32	58	260 225	260 225	0	41
Somalia Zambia	43			- 48				-1	
Zambia		40	84		69	180	182		46
Chad Emlerenciatere	14	2	23	27	12	201	208	-3	47
Turkmenistan	97	13	99	-	51	97	104	-7	48
Cameroon	62	24	68	43	40	139	149	-7	48
South Africa	92	7	82	37	75	60	68	-13	50
Central African Republic	44	17	35	47	32	168	193	-15	51
Rwanda	39	90	89	16	20	173	203	-17	52
quatorial Guinea	65	24	51	36	-	170	205	-21	53
Cambodia	32	12	79	59	37	115	143	-24	54
Kenya	42	13	69	33	49	97	120	-24	54
Côte d'Ivoire	68	5	51	34	38	157	195	-24	54
Swaziland	74	24	60	24	60	110	160	-45	57
Zimbabwe	73	33	85	80	50	80	132	-65	58
Botswana	94	34	90	7	14	58	120	-107	59
raq	72	12	90	54	76	50	125	-150	60

Methodology: Each country's level of coverage across five child survival indicators was scored and placed in one of three groups based on international targets and indicator-specific threshold levels used by the *Countdown to 2015*. Please see the Methodology and Research Notes for complete methodology.

Performance Measures

Strong performance Making progress

Falling behind

Strong performance: Coverage meets established targets or is high compared to that of other countries. Making progress: Coverage falls within the middle range compared with other countries (but in most cases falls far short of either the stated target or the broader goal of full coverage). Falling behind: Coverage falls far short of the target and is very low compared with the rest of the 60 countries. All coverage values are for 2005 or most recent year. Source: UNICEF. State of the World's Children 2007. – No data.

## SAVING THE LIVES OF CHILDREN UNDER 5: LOW-COST SOLUTIONS THAT WORK

### ON THE ROAD TO UNIVERSAL COVERAGE, COUNTRIES HAVE A LONG WAY TO GO

In recent decades, some countries have made giant leaps forward to protect the lives of mothers and children. But much remains to be done.

The *Report Card* analyzes the status of international commitment to child survival in 60 priority countries where children are at the greatest risk of dying before they reach the age of 5. For each country, it measures the reported levels of:

- Births attended by skilled health personnel
- · Infants breastfed exclusively for the first six months
- · 1-year-olds immunized against measles
- Children under age 5 with diarrhea who receive oral rehydration therapy and continued feeding
- Children under age 5 with suspected pneumonia taken to a health-care provider

# WHY DOESN'T THE REPORT CARD INCLUDE AIDS AND MALARIA?

The Report Card evaluates developing countries' commitments to saving children's lives by measuring their use of proven, low-cost interventions to fight common killers. Indicators were chosen based on their potential to save the most lives in the most countries. In order to make fair comparisons among countries, the indicators represent problems that affect children similarly in all 60 countries.

Diarrhea and pneumonia account for large proportions of deaths among children under 5 across all developing countries. These measures are fairly consistent across countries, whereas the proportions for malaria and AIDS differ strikingly across countries. More than two-thirds of child deaths occur in just 15 countries where the predominant causes are pneumonia, diarrhea and newborn complications (21, 17 and 32 percent, respectively). In these 15 countries, malaria and AIDS account for 10 and 3 percent of child deaths, respectively. Regional trends can be misleading. In sub-Saharan Africa, for example, some countries have very few malaria and/or AIDS deaths; whereas others are severely affected by malaria, AIDS or both.<sup>181</sup>

Interventions to fight AIDS and malaria are urgently needed in some countries. Recent increases in funding to fight AIDS and malaria will help save some children, but they will not save the lives of most children under 5 who die from other – often neglected – causes. The findings show tremendous unmet need for basic health services:

- Fewer than 15 percent of births are attended by skilled health personnel in Afghanistan, Bangladesh, Chad and Nepal. In Ethiopia, only 6 percent are attended.
- Fewer than 10 percent of infants are exclusively breastfed in Azerbaijan, Côte d'Ivoire, Gabon, Sierra Leone, Somalia and South Africa. And in Cambodia, Iraq and Yemen only 12 percent are breastfed. In Niger and Chad, only 1 and 2 percent of infants are exclusively breastfed.
- More than 40 percent of 1-year-olds are not immunized against measles in Angola, Congo, Côte d'Ivoire, Equatorial Guinea, Ethiopia, Gabon, Guinea, Haiti, India and Madagascar. And more than 60 percent are not immunized in Central African Republic, Chad, Nigeria and Somalia.
- Fewer than 30 percent of children with diarrhea are treated with oral rehydration therapy (ORT) in Brazil, Chad, Egypt, Guinea-Bissau, India, Mauritania, Nigeria, Swaziland, Tajikistan, Togo, Uganda and Yemen. And fewer than 20 percent receive ORT for diarrhea in Burundi, Democratic Republic of the Congo and Rwanda. In Botswana, only 7 percent receive ORT.
- Among children exhibiting symptoms of pneumonia, 30 percent or fewer are taken to a health-care provider in Afghanistan, Bangladesh, Botswana, Chad, Ethiopia, Haiti, Malawi, Nepal, Niger, Rwanda, Senegal and Togo.

Every country on the *Report Card* needs to make additional progress in saving children's lives. No country is performing well on every indicator. Indeed, many are performing well on one indicator, while they fall behind on another. Alarmingly, 41 of the 60 countries have dangerously low coverage rates on at least one indicator.

For example, Nepal and Rwanda certainly fend off much malnutrition and disease in the early months of children's lives thanks to high rates of breastfeeding. But both countries are falling behind on measures of disease treatment later on, so children may be protected in infancy, then neglected a few years later when they become ill with diarrhea or pneumonia. In contrast, South Africa has a relatively high rate of care-seeking for pneumonia, but very low rate of breastfeeding.

# SAVING THE LIVES OF CHILDREN UNDER 5: LOW-COST SOLUTIONS THAT WORK

# HEALTHY PREGNANCIES AND HEALTHY BABIES IN EGYPT

Egypt has made significant progress in reducing deaths of children under 5, yet within the country, there are very poor areas where child mortality rates are more than double the national average. Nagat is from such an area, a small village in Upper Egypt.

Nagat's first three pregnancies ended in miscarriage. When she became pregnant a fourth time, a volunteer from Save the Children's IMPRESS program visited her house and urged her to come in for regular checkups and training sessions. IMPRESS stands for Improving Pregnancy outcomes through Education and Supplementation.

Nagat enjoyed the IMPRESS sessions. She was fascinated by the laboratory testing and learned how to have a healthy pregnancy and recognize danger signs. She also learned about the importance of breastfeeding and birth-spacing, how to prepare nutritious meals for her baby, and what to do to prevent and treat common childhood diseases. Because Nagat was considered a high-risk case, the IMPRESS volunteer visited her house frequently over the course of her pregnancy to make sure she was putting into practice what she was learning.

In June 2005, Nagat gave birth to a healthy baby girl name Omnia. "I had suffered so much before," she said. "I just wanted this baby to be healthy." Nagat breastfed Omnia and has continued to make use of other knowledge she gained through IMPRESS. When Omnia got diarrhea, Nagat took her to the health clinic to be treated with oral rehydration solution. Other than that, Omnia has had no health problems.



# WHAT MORE IS NEEDED TO SAVE CHILDREN'S LIVES?

Clearly, too few children are receiving the effective and affordable interventions that could save their lives. Renewed effort is needed to bridge the widening gap between what can be done and what actually is being done. Health systems in developing countries must be strengthened so they can reach the poorest mothers and children with lifesaving information and services.

#### Reaching the poorest of the poor

A number of strategies have succeeded in saving the lives of the poorest, most marginalized children in developing countries. With greater national and international commitment, these approaches could be taken to a broader scale and more children could be saved.

**Basic newborn care** – Many babies can be saved in the vulnerable first month of life by promoting better care for mothers during pregnancy and childbirth and better care for newborns starting as soon as they are born. Community health workers in India are promoting birth preparedness, clean delivery, clean cord care and immediate drying, wrapping and warming of the baby. In Bangladesh, community nutrition promoters encourage birth attendants and mothers to delay bathing the newborn, begin exclusive breastfeeding immediately and maintain continuous skin-to-skin care. Low-cost interventions such as these could reduce newborn mortality by up to 70 percent.<sup>191</sup>

Community case management - Several developing countries, including Bangladesh, India, Mali and Nepal, have made significant progress in saving children's lives by investing in an approach called "community case management." This approach is especially effective at reaching children living in communities where many children either can't or don't get to a health facility when ill, and can easily die due to lack of basic care. Carefully selected community members are trained to assess, classify and treat children with signs of infection. Ministries of health support, supply and supervise the communitybased workers. And families are trained to recognize the signs of disease in children and seek care from trained providers when signs indicate serious disease. (See page 35 for a description of how community case management works at the local level.)



#### SAFE MOTHERHOOD IN VIETNAM

Ho A Tre is a young health worker in Quang Tri province, Vietnam. He was concerned that many women in his community delivered their babies at home with no skilled caregiver to help should something go wrong. For two years, A Tre tried his best to convince families that it's important to come into the local health station for skilled care during childbirth, but he had little success.

Last year, A Tre received "safe motherhood" training supported by Save the Children. He learned how to recognize danger signs during pregnancy and provide emergency aid to babies suffering from birth asphyxia, a common complication when a newborn receives too little oxygen during delivery, often caused by obstructed labor.

Several months later, a young pregnant woman named Ho Thi Duynh came into the clinic. She had been in labor for three days, was in great pain, and clearly exhausted. As she was a small woman, A Tre was very worried. He admitted her immediately, and monitored her carefully. After half a day, she gave birth to a baby boy, but he was not breathing. A Tre worked to resuscitate the baby, using techniques he learned in the training, and after 10 minutes, miraculously, the baby cried.

"My boy looked like he was dead," said Mrs. Duynh. "But after he got air from A Tre, he survived. Now he is breastfeeding very well and I am taking him into the health station to receive immunizations from A Tre."

"If Mrs. Duynh had delivered at home, the boy would have been dead," said A Tre.

Word of Ho Thi Duynh's story has spread around the community, and now more pregnant women are coming in for checkups and more mothers are delivering their babies at the health station. "I must work very hard now," says A Tre. "But I feel so enthusiastic because people need me and rely on me." **Positive deviance** – This is an approach based on the notion that solutions to tough problems can often be found in the very places where the problems are most severe. For example, mothers of malnourished children are encouraged to model the behavior of others in their village – the "positive deviants" – who may be just as poor and just as uneducated, but whose children are growing up healthy. The positive deviants are usually doing a few things differently, such as breastfeeding more or cooking with more nutritious ingredients. The positive deviance approach has helped save children's lives in Bangladesh, Ethiopia, Haiti, Indonesia, Mali, Mozambique, Myanmar, Nepal, Pakistan and Vietnam.

**Social marketing and promotion** – Many children's lives can be saved by informing and supporting parents in basic, inexpensive practices such as getting their children immunized, using oral rehydration salts for diarrhea, maintaining exclusive breastfeeding for the first six months, recognizing the danger signs of infection, spacing births at least two years apart, getting prenatal care, using mosquito nets to prevent malaria, and applying basic hygiene standards at home. Mass media and public education campaigns have led to lifesaving changes in behavior in countries such as Bangladesh, the Philippines and Tanzania.

**Policy change** – Dramatically larger numbers of children can be reached when governments improve national-level programs and policies for children. For example, advocacy efforts by national and international organizations have helped focus increased attention on newborn health care in Bangladesh. The country now has a comprehensive national policy that supports newborn health, incorporates newborn health indicators into the health information systems, and allocates 11 percent of the national training budget to newborn health. Similar policy change successes have been achieved around the world – from Bolivia to Mali.

# SAVING THE LIVES OF CHILDREN UNDER 5: LOW-COST SOLUTIONS THAT WORK

#### Expanding access to breakthrough interventions

Advances in public health and medicine are producing new ways to save children's lives. But greater investment is needed to make these solutions available to all children who need them.

Zinc for diarrhea – Researchers have found that when children are given zinc tablets along with oral rehydration solution, they recover more quickly from diarrhea and they are protected from recurrences.<sup>192</sup> Zinc is now being used to save children's lives in many countries, including Bangladesh, Bolivia, Cambodia, Egypt, Eritrea, Ethiopia, India, Indonesia, Kazakhstan, Madagascar, Mali, Nepal, Nicaragua, Niger, Pakistan, Peru, Philippines, Rwanda, Sierra Leone, Sudan and Tanzania. In community trials in Bangladesh, zinc supplementation resulted in a 23 percent reduction in duration of diarrheal illness and a 60 percent reduction in overall mortality.<sup>193</sup> At 1 cents a tablet, a full life-saving course of zinc treatment for diarrhea costs only 10 cents.<sup>194</sup>

**Better oral rehydration salts** – In 2004, an improved oral rehydration solution was introduced to treat diarrhea. This new "reduced osmolarity ORS" is more effective, has fewer side effects, reduces the need for hospitalization, and costs slightly less than the original solution.<sup>195</sup> The new formula is now widely available in developing countries, but like the original solution, it is sadly underused.

**Rotavirus vaccine** – The most common cause of diarrhea in children is rotavirus, which leads to severe watery diarrhea. Researchers believe it infects almost every child in the world by age 3 and kills 600,000 of them in poor countries. Last year, a new rotavirus vaccine was approved for use. It has the potential to save hundreds of thousands of lives, but the challenge is to get it to the children who need it.<sup>196</sup> The cost of the vaccine also makes distribution difficult in poor parts of the world. Nicaragua is one of the first countries to make rotavirus vaccine widely available. The government of Nicaragua and vaccine manufacturer Merck & Co. have teamed up on a demonstration project that will provide three doses of the vaccine to all infants in Nicaragua for three years.<sup>197</sup>

**Breakthrough malaria treatment** – Artemisininbased combination therapy (ACT) is a new hope for treatment and prevention of malaria, which kills 850,000 children a year, mostly in sub-Saharan Africa. ACT is a safe, effective, fast-acting treatment for multidrug-resistant

# INTERVENTION COVERAGE FAVORS THE URBAN, WEALTHY AND WELL-EDUCATED

Children of the poorest, most marginalized and remote families are considerably less likely to be reached by lifesaving interventions than children from the wealthiest families.

In Eritrea, Chad and Niger, for example, rural mothers are more than sex, seven and eight times more likely to give birth without a skilled attendant.<sup>182</sup> In Ethiopia, mothers in rural areas are as much as 15 times more likely to give birth without a skilled attendant.<sup>183</sup> In Burundi, Nepal and Pakistan, rural births are fives times less likely to be assisted by skilled health personnel.<sup>184</sup>

Poor mothers and their newborns face similar risks. In Bangladesh, Chad, Haiti and Nepal, less than 4 percent of births to poor mothers are attended.<sup>185</sup> In Ethiopia, less than I percent of poor mothers give birth with a skilled attendant, poor mothers are more than 28 times more likely to give birth without assistance than the wealthiest mothers.<sup>186</sup>

Wealth-related disparities in immunization coverage are the most severe in sub-Saharan Africa, where the poorest children are three times less likely to be immunized than the wealthiest children.<sup>187</sup> In Niger, less than 5 percent of the poorest children are fully immunized, compared to more than 50 percent of the wealthiest children.<sup>188</sup> In Chad, Nigeria and Yemen the poorest children are roughly 4.5 times less likely to be immunized against measles.<sup>189</sup>

Disparities in seeking care for pneumonia also exist. Whereas boys and girls are similarly taken to appropriate care, rural children, poor children and children of poorly educated mothers are more than 30 percent less likely than others to be taken to an appropriate health-care provider when they show signs of pneumonia.<sup>190</sup>

malaria that also helps prevent recurrence of the disease.<sup>198</sup> ACT has been used in Asia for more than 10 years but is not yet widely available in Africa, in part because of cost. Scientists are now working to find less expensive ways to manufacture the drug and increase the shelf-life.

Better mosquito nets – When children sleep under insecticide-treated bed nets (ITNs), they are protected from nighttime mosquito bites that cause malaria. Insecticides make the nets more effective - even if they have small holes in them - because they kill mosquitoes and have repellent properties that reduce the number of mosquitoes that enter the house and attempt to feed. If many people in a community use ITNs, the numbers of mosquitoes will be reduced and all members of the community benefit, even if they do not own bed nets. To maintain the efficacy of ITNs, the nets must be retreated with insecticide every 6-12 months, or more frequently if the nets are washed. The need for frequent retreatments is one of the most difficult barriers to full coverage in countries where malaria is a killer. The best hope lies with newly developed, long-lasting treated nets that may retain their insecticidal properties for four to five years (the life span of the net), thus making retreatment unnecessary.<sup>199</sup> Long-lasting nets cost about \$5. Conventional nets can cost as little as \$3.200



### NEW HOPE FOR NICARAGUAN CHILDREN

Families living in Cacao Minitas, a small village of 1,800 people nestled in the mountains of Nicaragua, have few options for care when their children become ill. The local health post, located six miles away on steep, rocky roads, is only open two or three mornings a week. If children become ill at night, over the weekend, or when the health post is closed, their mothers must make the six- to eight-hour trek to the municipal health center – located 12 miles away – on foot or by donkey. During the rainy season, the dusty roads turn to mud, so parents must make the difficult hike, often through the pouring rain on slippery trails, carrying their sick child wrapped in blankets and plastic sheets. If they do not make it to the health center on time, the villagers of Cacao Minitas bury one of their young.

So when Yamilda and her husband Marvin, two seasoned volunteer health workers in Cacao Minitas, were approached by Save the Children and the Ministry of Health and asked to participate in the "community case management" program, they readily agreed. "We saw the need," they said. Yamilda had already served her community for almost 14 years as a *brigadista*, a community health worker trained in promoting and monitoring child health and nutrition. She monitored children's weight during monthly sessions, counseled mothers on nutrition, and collaborated with Ministry of Health officials to vaccinate children and provide micronutrients. However, Yamilda wanted to do more. Community case management allows her to take an active role in diagnosing and treating certain childhood illnesses.

Now, if a child becomes ill in Cacao Minitas, mothers visit Yamilda and Marvin's white clapboard house. Yamilda opens her kit and takes out laminated instruction cards, a stopwatch, thermometer, bandanna, measuring cups and a visit log. She asks the mother a series of questions: "Is your child vomiting? Is your child unable to drink or breastfeed? Has your child had convulsions?" If the answer is yes to any of those questions, Yamilda wraps the child in the purple bandanna, gives the mother a reference card and urges her to take the child to

the municipal health center immediately. Once the mother arrives at the health center, the purple bandanna signals to the nurses that the child is in grave danger. The on-call doctor treats the child using the information Yamilda has provided on the reference card. If the illness is not as severe, Yamilda continues her questions: "Is your child having trouble breathing? Does your child have bloody diarrhea?" Yamilda asks the mother to raise the child's shirt to count the child's breaths. If the child exhibits danger signs that indicate severe pneumonia, such as rapid respiration, wheezing or a sunken chest, Yamilda administers the first dose of antibiotic, gives the mother the bandanna, and refers her to the health center. If the case is less severe, Yamilda prescribes a treatment of antibiotics and follows up with visits to the house to check on the child's progress and coach the parents on follow-up treatment.

Dr. Sara Arostegui, director of the Municipal Health Office for the area, says that community case management has strengthened the skills of *brigadistas* and improved the overall efficiency of the health system. She sees fewer cases of sick children at the health post and health center because *brigadistas* such as Yamilda provide the first line of defense. Nurses and doctors are freed to treat more complicated or urgent cases. Mothers in Cacao Minitas echo the positive sentiment. "Now we don't have to walk to the health post to get care. Our neighbor can help." They also note the importance of zinc for treating diarrhea. "Before we had zinc, it took a long time for children to recover from diarrhea. Now children get better faster."

One mother, when asked how many children she had, said, "I have two now. I used to have three children. The third died over a year ago." She explained that days after being born, her baby had trouble breathing, turned blue and died the next morning, perhaps of newborn sepsis. Though she never asked it directly, the question hung in the air: Would Yamilda have been able to prevent that death?

### SAVING THE LIVES OF CHILDREN UNDER 5: LOW-COST SOLUTIONS THAT WORK

### FIGHTING MALNUTRITION IN MALAWI

Emily knows the pain of losing a child. Of her 11 children, five have died. Last year, she and her family prepared to lose a sixth. Her son Umali was 4 years old and had all the same symptoms that Emily had seen in her other children before they died. His legs and arms were swollen. He was tired and sluggish.

In her village in southern Malawi, traditional healers are often used to cure the sick. Emily had taken each of her other children to the village healer. Each time she was told the child's illness was caused by outside factors – perhaps by her husband having an extramarital affair. The traditional healer had no cure for the children and all five died.

When Umali got sick, Emily decided to try something different. She took him to a nearby health center where trained nurses quickly diagnosed Umali's problem as severe malnutrition. Umali took part in a new outpatient program run by the Ministry of Health with technical and financial support from Save the Children that allows malnourished children to be treated in their own homes. Before this program was introduced, nearly all malnourished children had to check into nutritional rehabilitation units in health facilities for a month or more, and their mothers would have to stay with them, which was costly and put great strain on families and other young children at home.

The key to success of the outpatient program is "readyto-use therapeutic food" (RUTF). The original RUTF is known as *Plumpy'nut* and is manufactured in France, but Malawi is now producing its own version, called *chiponde*. It tastes like peanut butter and has a special blend of vitamins and minerals that are essential for malnourished children. Emily was given enough RUTF to last for seven days and told to bring Umali back for a checkup in a week's time.

Over the course of the next four weekly checkups, Umali began to show signs of recovery. His energy improved and the swelling in his hands and feet disappeared. At the health center, Umali was given vitamin A, amoxicillin and folic acid along with his *chiponde*. When Emily and her son returned the fifth time, Umali was declared cured. They were given a last round of RUTF and the two returned home.

Since then, Umali has remained healthy, with no signs of relapse. He plays enthusiastically with his siblings and other children of the village. Emily knows that she can be proud of his health. If she had not taken him to the health center, he may have died like her other children. Importantly, she also now knows the signs of malnutrition and tells others in her community when they need to take their children to the health center.

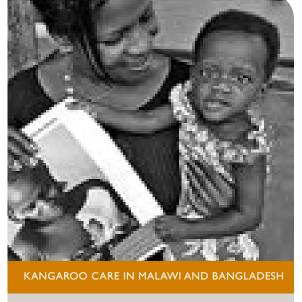


### HAPPY 5TH BIRTHDAY! CHILDREN'S BIRTHDAY TRADITIONS FROM AROUND THE WORLD

If they survive to reach age 5, here's how children in different countries might celebrate their birthdays:

- In **Egypt**, the fifth birthday is significant because children are now in school. They have made new friends, so celebrations include more than just close relatives and neighbors. Since so many people are invited they often serve two birthday cakes – one with candles and a second one without them. On birthdays, Egyptian families decorate their entire homes with paper garlands called zeena that look like chains of snowflakes.
- In **Ghana**, children wake up on their birthday to a special treat called oto. This is a patty made from mashed sweet potato and eggs and fried in palm oil. Later they have a party where they play a very old game called *Ampe*, eat stew, rice and a dish known as *kelewele*, which is fried plantain chunks.
- In **India**, a birthday child may put on new clothes, then kneel and touch the feet of his or her parents to show respect. Later the family visits a shrine where they pray and the child is blessed.
- In **Nicaragua**, birthday parties feature a *piñata*, which is a decorated bag or jug, usually shaped like an animal, and filled with candies, small toys and coins. The *piñata* hangs from the ceiling and blindfolded children are twirled around until they are dizzy and then attempt to break it with a stick. Guests are offered *cacao*, a traditional drink made from milk, sugar, cinnamon and roasted cocoa beans, *vigurón*, fried pork skin on a bed of cabbage and finally, the birthday cake.
- In **Nigeria**, the fifth birthday is considered a special event and families give huge parties, sometimes inviting more than 100 guests. The birthday feast can include an entire roasted cow or goat. Children often play a game called Pass the Parcel where, when the music stops, they attempt to unwrap a package that has a prize deep inside. If they don't reach the prize, they have to pass the package to the next person when the music begins again.
- In **Peru**, children receive fancy paper hats to wear at birthday parties. The birthday child's hat looks like a crown because he or she is the most special person of the day.
- In **Sudan**, children in rural areas and refugee camps usually do not celebrate birthdays, but children in cities do. They often have a cake with candles and drink a red punch called *karkady* that is made from hibiscus flowers.
- In **Vietnam**, everyone's birthday is celebrated on the first day of the new year, which is known as *Tet*. Vietnamese children do not know or acknowledge the exact day they were born. A baby turns one on *Tet* no matter when he/she was born that year. Children say they were born in the year of the symbol of the lunar calendar for that year. On the first morning of *Tet*, adults congratulate children on becoming a year older by presenting them with red envelopes that contain "lucky money."

**Sources:** Save the Children staff and Erlbach, Arlene. *Happy Birthday Everywhere*, The Millbrook Press, Brookfield, CT (1997)



The cover of last year's *State of the World's Mothers* report featured a photo of Grace, a mother in Malawi, holding her newborn baby girl Tumtumfwe, who was born two months premature, weighing only 2.2 pounds. When Tutumfwe's weight dropped to 1.8 pounds, Grace entered a Save the Children supported program at Bwaila Hospital in the capital city of Lilongwe where she learned to provide "kangaroo mother care," keeping her small baby wrapped close to her chest at all times to stay warm and breastfeeding every hour. Very quickly, Tumtumfwe's health began improving.

Today, Tumtumfwe is a little over a year old and weighs more than 14 pounds. She has lots of energy, likes to play all day, is curious, outgoing and beginning to talk. "She is my best friend," says Grace. "She is such a healthy baby. Since she was discharged from kangaroo mother care, she has not had a single health problem – no fever, not even diarrhea."

Save the Children has helped establish kangaroo care centers for low-birthweight babies at five hospitals in Malawi and is working to expand the program to additional sites. Hundreds of health workers have been trained and national guidelines are being developed to ensure consistent quality of care.

Save the Children is also promoting kangaroo care in Bangladesh. In partnership with the Bangladesh Rural Advancement Committee (BRAC), Save the Children has trained community-based nutrition workers to introduce the concept of kangaroo care to mothers during prenatal visits. A study evaluating the program's effectiveness found a 65 percent reduction in mortality for low-birthweight babies under 4.4 pounds whose mothers practiced kangaroo care.

### Changing the World by Investing in Children

Investing in children's health is not just the right thing to do - it's the smart thing to do. When children survive, grow up healthy and succeed in school, all of society benefits.

### **HEALTHIER CHILDREN**

Safeguarding health during early childhood is more important than at any other age. Good nutrition in the first 5 years helps children to grow better and avoid lifelong disabilities that will hinder their progress in school and throughout life. And vaccines that prevent death in children under 5 also prevent blindness, and mental and physical disabilities.<sup>201</sup>

Most brain development happens before a child reaches 3 years of age,<sup>202</sup> including before a child is born.<sup>203</sup> During pregnancy, a child's developing brain is highly vulnerable to damage if a mother is malnourished, suffers infections or is exposed to environmental hazards.<sup>204</sup> A large body of literature clearly indicates that when young children suffer chronic severe malnutrition and repeated infections, their cognitive ability is impaired and their ability to learn is permanently compromised.205

VIETNAM

Healthier and better-nourished children stay in school longer, attend more regularly, learn more and become healthier and more productive adults. For example, a study in China showed that children with better height for their age (i.e., better nourished children) performed better in school.<sup>206</sup> A study in Nepal found that better nourished children were more likely to attend school.<sup>207</sup> And a study in Sri Lanka found children who had more than five attacks of malaria scored approximately 15 percent lower on a cognitive test than children who had fewer than 3 attacks.208

### **HEALTHIER MOTHERS**

Mothers' health represents children's best hope for survival. When a mother dies, is weakened by disability, or is overwhelmed by the needs of many children, her children's lives are threatened - and too often lost. Conversely, if a mother's health and well-being are supported in tandem with child survival efforts, then mothers, children and all of society benefit.

More than half a million women die from pregnancy and childbirth-related causes each year, a number that has changed very little in past decades.<sup>209</sup> Nearly all of these deaths occur in the developing world where, every year, 60 million women give birth at home, without a skilled person to help them.<sup>210</sup> When a mother dies from childbirth, it means almost certain death for her newborn and increases the risk of death for her other young children. Motherless newborns are between 3 and 10 times more likely to die than newborns whose mothers survive.211

When mothers have access to health-care services during pregnancy, delivery and after childbirth, the risk of death is reduced for both mother and baby. Key services include immunization against tetanus, nutritional education, appropriate micronutrient supplements, access to skilled birth attendants, emergency obstetrical and basic newborn care and information about breastfeeding and birth spacing.

When mothers use modern contraception, this also leads to improvements in maternal and child survival. Voluntary family planning has been estimated to prevent one-fourth of maternal deaths by helping women delay early pregnancy and childbirth, prevent closely spaced births and reduce the risk of HIV transmission.<sup>212</sup> It also increases the survival of babies. Infants spaced more than three years apart are more than three times as likely to survive as infants born less than one-and-a-half years apart.213



### MORE PRODUCTIVE SOCIETY

Experts studying the relationships between children's health and the economy say that when a country invests in children's health it is making a sound economic decision. Greater investments in children's health result in better educated and more productive adults and set in motion favorable demographic changes. Improving the health of children is also an effective way to interrupt the intergenerational cycle of poverty, as healthier, better educated and less impoverished parents pass along these benefits to their children.<sup>214</sup>

Numerous studies have shown that children who benefit from child survival health and nutrition programs go on to earn higher wages later in life. It is estimated that iron supplementation, which improves a child's cognitive ability, could potentially bring about increases in future wages on the order of 13-25 percent.<sup>215</sup> And a study in India estimated the increase in earnings resulting from improvements in cognitive development and school performance brought about by a supplemental feeding program. On average, the increase in earnings potential due to the program was 55 percent for severely malnourished children and 27.5 percent for moderately malnourished children.<sup>216</sup>

A study in Bolivia calculated the cost-benefit ratio of investing in the survival of young children. Considering all the measurable benefits – improved health, improved education and economic gains – the authors estimated that every dollar invested in child survival would yield between \$1.38 and \$2.38 in returns.<sup>217</sup> Another study in the Philippines concluded that every dollar invested in a children's health program would return \$3 of additional wages through improved achievements in education.<sup>218</sup>

When countries significantly reduce mortality among children, they set in motion the so-called demographic transition. Parents make decisions about how many children to have based on the likelihood of their children surviving, so when more children survive, birth rates start declining. Families with fewer children can invest more resources in the health and education of the children they do have. And economic growth is stimulated over time as more people – and better qualified people – enter the workforce, especially mothers who are having fewer pregnancies.<sup>219</sup>

The link between children's health and a country's wealth were further confirmed by an analysis of data from



BURKINA FASO

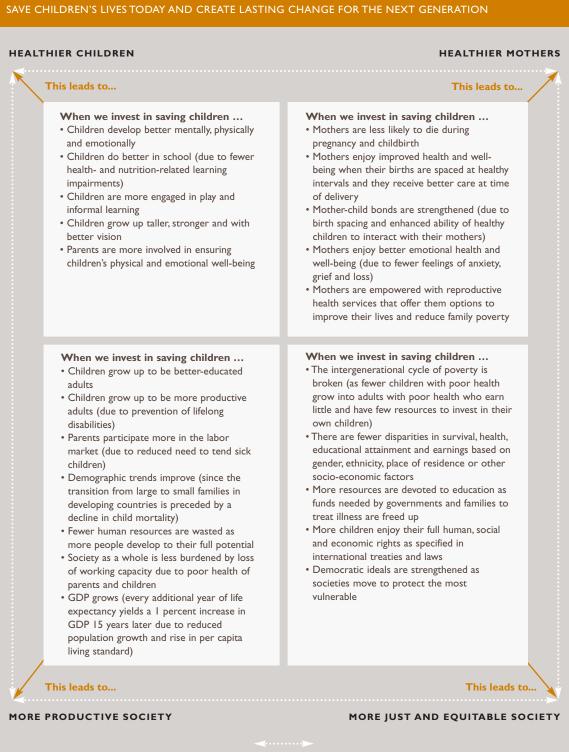
Latin America and the Caribbean that found that growth in gross domestic product (GDP) is statistically associated with life expectancy. The results suggest that for every additional year in life expectancy, there will be an additional 1 percent increase in GDP 15 years later.<sup>220</sup> Also, life expectancy at birth is one of the strongest indicators of growth in GDP.<sup>221</sup>

### MORE JUST AND EQUITABLE SOCIETY

A child's opportunity to survive, grow up healthy and to get a good education should not be determined by the accident of where they were born. Conventional wisdom once held that rates of child mortality were a measure of a country's development. We now know that a direct attack on infant and child mortality can be an instrument of social development.

Reducing child mortality interrupts the cycle of poverty in which large numbers of people are caught.<sup>222</sup> For example, one-third to a half of the growth in East Asia from 1965 to 1990 can be attributed to reduced child mortality and its consequences.<sup>223</sup>

Reducing child mortality is also likely to promote self-confidence and social participation among adults, communities and nations. Healthier, better educated people are more likely to have the skills and disposition needed to work with others to advance common interests. And when a greater percentage of a country's population is thriving economically, people are better positioned to hold governments accountable for the needs of all citizens.<sup>224</sup>



The interlocking, mutually reinforcing pathways that link saving children's lives to a better future for all members of society.

### Child Deaths in the Industrialized World

### UNITED STATES HAS A HIGHER DEATH RATE THAN MOST OTHER COUNTRIES

Although the under-5 mortality rate in the United States has fallen in recent decades, it is still higher than many other wealthy nations – 2.3 times that of Iceland and more than 75 percent higher than the rate of the Czech Republic, Finland, Italy, Japan, Norway, Slovenia and Sweden.

The causes of child deaths in the industrialized world differ dramatically from those in developing countries. In the developing world, over half of under-5 deaths are caused by pneumonia, diarrhea or newborn conditions. In the industrialized world, these problems rarely lead to death. Children's deaths are most likely the result of injury suffered in traffic accidents, intentional harm, drowning, falling, fire and poisoning.<sup>225</sup>

Throughout the industrialized world, children from poor or disadvantaged backgrounds are more likely to be injured or killed. Factors such as single parenthood, low levels of maternal education, teenage motherhood, substandard housing, large family size and parental drug or alcohol abuse increase the risks that a child will not survive to age 5.<sup>226</sup>

Children are far more likely to die during the first year of life than they are at older ages. And death rates for males are substantially higher than rates for females for every age group of children.<sup>227</sup>

In the United States, American-Indian, Alaska-Native and African-American children have the highest death rates.<sup>228</sup>



Here are some additional facts about child mortality in the industrialized world:

- Only about 1 percent of the 10 million under-5 deaths every year occur in wealthy countries.<sup>229</sup>
- Iceland has the world's lowest child mortality rate (3 per 1,000 live births).
- Romania has the highest child mortality rate in the more developed world (19 per 1,000 live births).
- Out of 44 more developed countries, the United States is tied for 26th place with Croatia, Estonia and Poland. In all three countries there are 7 child deaths per 1,000 live births.
- There are 14 countries with higher under-5 mortality rates than the United States. They are: Slovakia, Hungary, Lithuania, Latvia, Belarus, Serbia and Montenegro, Bulgaria, Bosnia and Herzegovina, Moldova, Ukraine, Macedonia, Russia, Albania and Romania.
- Within the United States, Connecticut has the lowest child death rate (19.6 deaths among children ages 1 to 4 per 100,000 children) and Wyoming has the highest rate (53.7 deaths per 100,000 children).
- In the United States, between 1980 and 2003, death rates dropped by 46 percent for infants and 51 percent for children ages 1 to 4.<sup>230</sup>
- American-Indian children ages 1 to 4 have the highest death rates (49 per 100,000), followed by African-American children (46 per 100,000), Hispanic children (29 per 100,000), non-Hispanic white children (28 per 100,000) and Asian/Pacific Islander children (23 per 100,000).<sup>231</sup>
- Among wealthy nations, Sweden, the United Kingdom, Italy and the Netherlands have the lowest rates of child deaths due to injury. In the United States and Portugal, the rates of child injury death are twice as high.<sup>232</sup>
- One in 71 mothers in the United States is likely to lose a child before his or her fifth birthday. A mother in the United States has a 2.5 fold greater risk of experiencing the death of a child than a mother in Iceland, Italy or Japan and is almost 3 times more likely to lose a child than a mother in the Czech Republic or Slovakia.

ALASKA, UNITED STATES

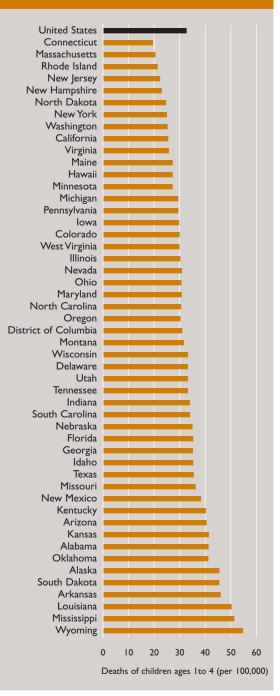
### CHILD DEATHS IN THE DEVELOPED WORLD

Iceland Sweden Slovenia Norway Japan Italy Finland Czech Republic Switzerland Spain Portugal Netherlands Luxembourg Greece Germany France Denmark Belgium Austria United Kingdom New Zealand Malta Ireland Canada Australia United States Poland Estonia Croatia Slovakia Hungary Lithuania Latvia Belarus Serbia Montenegro Bulgaria Bosnia and Herzegovina Moldova, Republic of Ukraine Macedonia, TFYR **Russian Federation** Albania Romania 0 5 10 15 20 Under-5 deaths (per 1,000 live births)



- Whereas only 1 child in 100,000 in the United States dies of pneumonia each year, roughly 1 in 15 children in Angola, Afghanistan, Niger and Sierra Leon die of pneumonia each year. Children in these countries are 6,700 times more likely to die of pneumonia than children in the United States.
- More than 16,500 lives could be saved each year in the United States alone if our under-5 mortality rate was the same as Iceland. If the U.S. rate of under-5 mortality was similar to that of France, Germany and Italy (all 4 per 1,000 live births), over 12,000 child lives could be spared.
- In the eastern countries of Europe, social inequalities are increasing and the AIDS epidemic is growing rapidly, putting more children at risk of death.<sup>233</sup>

### CHILD DEATH RATES IN THE UNITED STATES



**Source:** Centers for Disease Control and Prevention. National Center for Health Statistics. *Health Data for All Ages.* www.cdc.gov/nchs/ health\_data\_for\_all\_ages.htm. Rates are three-year annual averages (2000-2003). Data are not available for Vermont.

### Take Action Now! Make a World of Difference for Mothers and Children

Every year, 10 million die before reaching age 5. In order to meet United Nations targets to reduce child deaths and improve mothers' health, basic, low-cost lifesaving services need to reach those women, children and newborns who need help most.

Now is the time for governments, the private sector and humanitarian organizations to take joint responsibility to reduce the needless deaths of mothers and children. Research has shown that basic, low-cost solutions combined with political will and financial commitment could save the majority of these lives. By ensuring that mothers and children everywhere have access to good quality care, the world community can provide a more promising future for families, communities and society as a whole.

Help us save the lives of mothers and children around the world:

Tell Congress to support child survival legislation. Save the Children is working with members of Congress to build support for legislation that would help save the lives of children under 5. Proposed legislation would increase resources to reduce maternal, newborn and child deaths and require a U.S. strategy to help meet the global Millennium Development Goal of reducing child mortality by two-thirds by 2015.

Go to www.savethechildren.org/action to send a note of support to your member of Congress.

Join the Save the Children Action Network. to receive monthly e-mail updates on legislative issues regarding child survival as well as other critical policy issues affecting children. Learn about ways that you can get involved and make your voice heard. To sign up, visit www.savethechildren.org/action

Support on-the-ground programs that work. Visit www.savethechildren.org to learn more and do more! www.savethechildren.org



PARTNERSHIP FOR MATERNAL, NEWBORN AND CHILD HEALTH

Save the Children is a member of the Partnership for Maternal, Newborn and Child Health, an unprecedented collaboration among the world's leading maternal, newborn and child-health professionals. The Partnership unites developing and donor countries, UN agencies, professional associations, academic and research institutions, foundations and NGOs to accelerate national, regional and global progress towards UN Millennium Development Goals 4 and 5. These goals call for reducing the rate of child deaths by two-thirds and the ratio of maternal deaths by threequarters by 2015 (starting from 1990 baselines). For more information, visit www.pmnch.org



### Appendix: The Mothers' Index and Country Rankings

The eighth annual *Mothers' Index* helps document conditions for mothers and children in 140 countries – 41 developed nations<sup>1</sup> and 99 in the developing world – and shows where mothers fare best and where they face the greatest hardships. All countries for which sufficient data are available are included in the *Index*.

Why should Save the Children be so concerned with mothers? Because 75 years of field experience have taught us that the quality of children's lives depends on the health, security and well-being of their mothers. In short, providing mothers with access to education, economic opportunities and maternal and child health care gives mothers and their children the best chance to survive and thrive.

This year, we are introducing several improvements to the *Mothers' Index*. First, we are grouping countries in three tiers: more developed, less developed and least developed. This enables us to rank each country against others with similar levels of national wealth and human development, and to more fairly evaluate their performance. Second, we are introducing new indicators of women's and children's well-being in each of the three tiers, which enable us to include more countries in the *Index* and to evaluate their relative performance using measures appropriate for their level of development.

The *Index* relies on information published by governments, research institutions and international agencies. The *Complete Mothers' Index*, based on a composite of separate indices for women's and children's well-being, appears in the fold-out table in this appendix. A full description of the research methodology and individual indicators (briefly summarized in box below) appears after the fold-out. Indicators that are unique to a single tier are highlighted in bold type.

2007 MOTHERS' INDEX INDICATO	DRS					
TIER 1: More Developed Countries 44 countries	TIER 2: Less Developed Countries 83 countries	TIER 3: Least Developed Countries 45 countries				
• lifetime risk of maternal mortality	• lifetime risk of maternal mortality	• lifetime risk of maternal mortality				
<ul> <li>percentage of women using modern contraception</li> </ul>	<ul> <li>percentage of women using modern contraception</li> </ul>	<ul> <li>percentage of women using modern contraception</li> </ul>				
• female life expectancy at birth	<ul> <li>percentage of births attended by skilled health personnel</li> </ul>	<ul> <li>percentage of births attended by skilled health personnel</li> </ul>				
<ul> <li>expected number of years of formal schooling for females</li> </ul>	<ul> <li>female life expectancy at birth</li> </ul>	• female life expectancy at birth				
<ul> <li>maternity leave benefits (length and percentage of wages paid)</li> </ul>	<ul> <li>expected number of years of formal schooling for females</li> </ul>	<ul> <li>expected number of years of formal schooling for females</li> </ul>				
<ul> <li>ratio of estimated female-to-male earned income</li> </ul>	<ul> <li>ratio of estimated female-to-male earned income</li> </ul>	<ul> <li>ratio of estimated female-to-male earned income</li> </ul>				
<ul> <li>participation of women in national government</li> </ul>	<ul> <li>participation of women in national government</li> </ul>	<ul> <li>participation of women in national government</li> </ul>				
• under-5 mortality rate	• under-5 mortality rate	• under-5 mortality rate				
<ul> <li>gross pre-primary enrollment ratio</li> <li>gross secondary enrollment ratio</li> </ul>	<ul> <li>percentage of children under age 5 moderately or severely underweight for age</li> </ul>	<ul> <li>percentage of children under age 5 moderately or severely underweight for age</li> </ul>				
gross secondary emoniment ratio	• gross primary enrollment ratio	• gross primary enrollment ratio				
	• gross secondary enrollment ratio	• ratio of girls to boys in primary				
	• percentage of population with access to safe water	<ul> <li>school</li> <li>percentage of population with access to safe water</li> </ul>				



### APPENDIX: THE MOTHERS' INDEX AND COUNTRY RANKINGS

#### **MOTHERS' INDEX RANKINGS**

European countries – along with New Zealand and Australia – dominate the top positions while countries in sub-Saharan Africa dominate the lowest tier. The United States places 26th this year.

2007 M	IOTHERS' INDEX RANKING									
TOP I Best pl	D: aces to be a mother	BOTTOM 10: Worst places to be a mother								
RANK	COUNTRY	RANK	COUNTRY							
1	Sweden	131	Djibouti							
2	Iceland	132	Burkina Faso							
3	Norway	133	Ethiopia							
4	New Zealand	134	Eritrea							
5	Australia	135	Angola							
6	Denmark	136	Guinea-Bissau							
7	Finland	137	Chad							
8	Belgium	138	Yemen							
9	Spain	138	Sierra Leone							
10	Germany	140	Niger							

While most industrialized countries cluster tightly at the top of the *Index* – with the majority of these countries performing well on all indicators – the highest-ranking countries attain very high scores for mother's and children's health, educational and economic status.

The 10 bottom-ranked countries in this year's *Mothers' Index* are a reverse image of the top 10, performing poorly on all indicators. Conditions for mothers and their children in these countries are devastating.

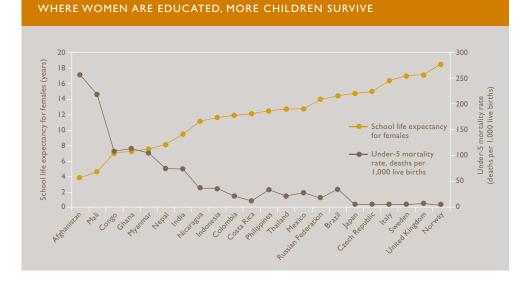
- Two-thirds of all births are not attended by skilled health personnel.
- On average, 1 in 13 mothers will die in her lifetime from pregnancy-related causes.
- 1 in 5 children dies before his or her fifth birthday.
- 1 in 3 children suffers from malnutrition.
- More than 1 in 3 children are not attending primary school.
- Only 3 girls for every 4 boys are enrolled in primary school.
- On average, women have less than 5 years of formal education.
- Women earn only half what men do for equal work.

The contrast between the top-ranked country, Sweden, and the lowest-ranked country, Niger, is striking. A skilled attendant is present at virtually every birth in Sweden, while only 16 percent of births are attended in Niger. A typical Swedish woman has almost 17 years of formal education and will live to be 83, 72 percent are using some modern method of contraception, and only one in 150 will see her child die before his or her fifth birthday. At the opposite end of the spectrum, in Niger, a typical woman has less than 3 years of education and will live to be 45. Only 4 percent of women are using modern contraception, and 1 child in 4 dies before his or her fifth birthday. At this rate, every mother in Niger is likely to suffer the loss of two children.

The data collected for the *Mothers' Index* document the tremendous gaps between rich and poor countries and the urgent need to accelerate progress in the health and well-being of mothers and their children. The data also highlight the regional dimension of this tragedy. Ten of the bottom 11 countries are in sub-Saharan Africa. That region also accounts for 18 of the 20 lowest-ranking countries.

Individual country comparisons are especially startling when one considers the human suffering behind the statistics:

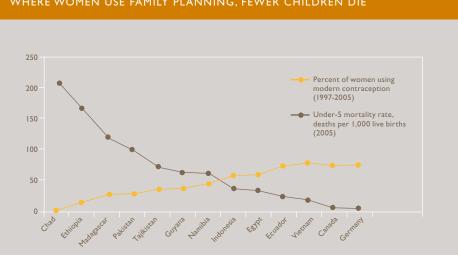
- Fewer than 15 percent of births are attended by skilled health personnel in Afghanistan, Bangladesh, Chad, Ethiopia and Nepal.
- Over the course of her lifetime, 1 woman in 7 will die in pregnancy or childbirth in Angola, Malawi and Niger; the maternal death risk is 1 in 6 in Afghanistan and Sierra Leone.
- A typical woman will die before the age of 45 in Angola, Central African Republic, Chad, Equatorial Guinea, Liberia, Malawi, Mozambique, Nigeria, Sierra Leon, Zambia and Zimbabwe. Life expectancy for women is only 35 in Lesotho and 33 in Botswana. In Swaziland, the average woman will not live to see her thirtieth birthday.
- Fewer than 5 percent of women use modern contraception in Afghanistan, Angola, Chad, Democratic Republic of the Congo, Guinea, Guinea-Bissau, Niger, Rwanda and Sierra Leone.
- In Sudan and Yemen, for equal work, women earn 30 cents or less for every dollar men earn.
- In Djibouti and Niger, a typical female has less than 3.5 years of schooling and fewer than half of all children are enrolled in primary school.



#### Source: Under-5 mortality data: UNICEF, State of the World's Children 2007; School life expectancy for females: UNESCO Institute for Statistics. http://stats.uis.unesco.org /TableViewer/tableView.aspx?ReportId=238 <http://stats.uis.unesco.org/TableViewer /tableView.aspx?ReportId=238>. Data are from 2001-2004.

- In Niger and Sierra Leone there are 72 girls in school for every 100 boys. In Central African Republic and Chad, there are about 65 girls in school for every 100 boys. And in Afghanistan, only 44 girls are in school for every 100 boys.
- One child in 4 does not reach his or her fifth birthday in Afghanistan, Angola, Niger and Sierra Leone.
- Nearly half of all children under age 5 are suffering from moderate or severe malnutrition in Bangladesh, Burundi, Cambodia, India, Nepal, Timor-Leste and Yemen.
- More than 60 percent of the population of Afghanistan and Papua New Guinea lacks access to safe water in Ethiopia and Somalia.

Statistics are far more than numbers. It is the human despair and lost opportunities behind these numbers that call for changes to ensure that mothers everywhere have the basic tools they need to break the cycle of poverty and improve their own quality of life, as well as that of their children, and generations to come.



### WHERE WOMEN USE FAMILY PLANNING, FEWER CHILDREN DIE

**Source:** UNICEF, State of the World's Children 2007.

### APPENDIX: THE MOTHERS' INDEX AND COUNTRY RANKINGS

### CHANGES IN HOW WE RANK WEALTHIER COUNTRIES

This year, our *Mothers' Index* has been improved to include more industrialized countries and to rank them according to better criteria. As a result, we are now able to calculate rankings for 18 additional countries that were not included in the *Mothers' Index* in past years.

The *Index* introduces several new indicators to more accurately evaluate mothers' and children's well-being in the wealthiest countries. It also removes several indicators that were not particularly relevant to women and children in the industrialized world.

New to this year's *Index* for more developed countries are indicators for: female life expectancy, years of schooling for females, maternity leave benefits, female vs. male income, under-5 mortality and school enrollment. The indicators that have stayed on the *Index* for these countries are: maternal mortality, modern contraception usage and women's participation in national government.

The indicators no longer on this portion of the *Index* are: births attended by skilled personnel, pregnant women with anemia, adult female literacy, infant mortality, access to safe water and children suffering from malnutrition. Most wealthy countries are doing very well on all these indicators, or do not consistently report data, so comparisons revealed few differences.

The new *Mothers' Index* for wealthier countries reveals some interesting trends and distinctions:

Female life expectancy is high and the risk of maternal mortality is low in every industrialized country. On average in these countries, women live to be 80 years old, and face only a I in 6,000 risk of dying during pregnancy or childbirth.

Mothers tend to be well-educated in all these countries as well, with an average of 16 years of formal schooling.

Indicators of women's economic status reveal great disparities among the wealthier countries. For example, the ratio of female-to-male earned income ranges from a high in Sweden (where women earn 81 cents on average for every dollar earned by men) to a low in Austria and Japan (where women earn 44 cents per dollar earned by men). Maternity leave benefits also vary greatly among countries. In 22 countries, laws require new mothers to be paid 100 percent of their wages for anywhere from 14 weeks to more than a year. In the United States, new mothers are entitled to only 12 weeks of maternity leave and there is no requirement that they be paid during that time.

Use of modern contraception also varies greatly among countries, ranging from a high of 81 percent in the United Kingdom (excluding Northern Ireland) to a low of 8 percent in Albania. Political participation is similarly varied. Whereas only 7 percent of seats in national government are held by women in Albania, in Sweden, women occupy 47 percent of seats.

The section of the *Index* that measures children's wellbeing in the wealthiest countries also reveals commonalities and differences. In all top-tier countries, it is rare for children to die before reaching age 5 (only 1 child in 125 on average dies). But there are great differences when it comes to children's education. The percentage of children enrolled in pre-school ranges from a high of 100 percent in nine countries to a low of 32 percent in Macedonia. And secondary-school enrollments range from 100 percent in 19 countries to 78 percent in Albania.



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SWITZERLAND

### WHAT THE NUMBERS DON'T TELL YOU

Very few countries in the developing world have a reliable system for registering births and deaths. While surveys by governments and international agencies attempt to estimate the size of the problem, there are many sources of potential error, such as under-reporting of newborn and maternal deaths when childbirth takes place at home. In addition, populations surveyed in developing countries are often in easy-to-reach, relatively advantaged areas, thus introducing questions of sample bias and a tendency to underestimate the scope and severity of problems.

The condition of geographic or ethnic sub-groups in a country may vary greatly from the national average. Remote rural areas and the urban poor tend to have fewer services and more dire statistics. War, violence and lawlessness also do great harm to the well-being of mothers and children, and often affect certain segments of the population disproportionately. These details are hidden when only broad national-level data are available.



### FREQUENTLY ASKED QUESTIONS ABOUT THE MOTHERS' INDEX

Why doesn't the United States do better in the rankings? The United States ranked 26th this year based on several factors:

- One of the key indicators used to calculate well-being for mothers is lifetime risk of maternal mortality. The United States' rate for maternal mortality is 1 in 2,500. Twentyeight countries performed better on this indicator, including all the Western and Northern European countries and Australia, Canada, Croatia, Czech Republic, Hungary, Japan, Lithuania, Montenegro, New Zealand, Poland, Serbia, Slovakia and Slovenia.
- Similarly, the United States did not do as well as many other countries with regard to under-5 mortality rates. The U.S. under-5 mortality rate is 7 per 1,000 births. Twenty-five countries performed better than the U.S. on this indicator.
- The United States has the least generous maternity leave policies of any wealthy nation.
- The United States is also lagging behind with regard to the political status of women. Only 16 percent of seats in the national government in the U.S. are held by women, compared to 47 percent in Sweden and 38 percent in Finland and Norway.
- Wages are similarly inequitable. Compared to women in Sweden, working mothers in the United States earn 38 cents less on average for every dollar earned by men.

#### Why is Sweden number one?

Sweden performed as well as or better than other countries in the rankings on all the indicators. It has the highest ratio of female-to-male earned income, the highest percentage of women with seats in the national government and one of the lowest maternal and under-5 mortality rates in the world.

### Why are some countries not included in the Mothers' Index?

Rankings were based on a country's performance with respect to a defined set of indicators related primarily to health, nutrition, education and economic status. There were 140 countries for which published information regarding performance on these indicators existed. All 140 were included in the study. The only basis for excluding countries was insufficient or unavailable data.

# What should be done to bridge the divide between countries that meet the needs of their mothers and those that don't?

- Governments and international agencies need to increase funding to improve education levels for women and girls, provide access to maternal and child health care and advance women's economic opportunities.
- The international community also needs to improve current research and conduct new studies that focus specifically on mothers' and children's well-being.
- In the United States and other industrialized nations, governments and communities need to work together to improve education and health care for disadvantaged mothers and children.

#### 2007 MOTHERS' INDEX RANKINGS

Country	Mothers' Index Rank*	Women's Index Rank <sup>***</sup>	Children's Index Rank <sup>**</sup>
IER I: More Developed Count			
weden			4
celand	2	25	2
lorway Jew Zealand	4	3	12
vew Zealand	5	4	28
Denmark	6	7	18
inland	7	6	22
elgium	8	9	8
pain	9	10	。 
	10	13	3
Germany Jetherlands		8	21
Inited Kingdom	12	11	22
rance	12	15	10
witzerland	14	17	13
Canada	15	12	25
lovenia	15	12	16
lovenia Nustria	16	25	9
stonia	17	19	9
aly	17	27	14
	20	14	29
ithuania ortugal	20	22	17
reland	21	18	26
	22	23	26
Breece	23	31	20
Czech Republic atvia	24	20	33
atvia Jnited States	25	20	33
	26	21	30
lungary Iovakia	26	24	26
	28	28	24 5
ipan elarus	29 30	29	32
	30	35	32
1alta			
oland	32 33	30	31
uxembourg	33	33	15
Croatia		26	35
ulgaria	35	32	34
ussian Federation	36	37	37
Jkraine	37	40	36
omania Addama Daamhlia af	38 39	36	38 39
10Idova, Republic of	40	38 39	40
1acedonia, the former Yugoslav Rep. of	40	41	40
			41
Ibania			
Ilbania TER II: Less Developed Countr	ries		
Ilbania TIER II: Less Developed Countr irael	r <mark>ies</mark> I	I	3
Ilbania <mark>TER II: Less Developed Countr</mark> grael urgentina	r <mark>ies</mark> I 2	 2	11
Ilbania <mark>TER II: Less Developed Countr</mark> grael urgentina Jruguay	ries I 2 3	 2 3	11
Ilbania TER II: Less Developed Countr Irgentina Iruguay arbados	ies 1 2 3 4	 2 3 4	11
Ilbania <mark>TER II: Less Developed Countr</mark> grael urgentina Jruguay	ies 1 2 3 4 5	 2 3 4 5	11
Ilbania TER II: Less Developed Countr Irgentina Iruguay arbados	ies I 2 3 4 5 6	 2 3 4 5 8	 4 4
Ilbania TER II: Less Developed Countr arael urgentina Iruguay arbados iorea, Republic of Lyprus ahamas	ies I 2 3 4 5 6 7	I 2 3 4 5 8 7	  4  4  6     8
Ilbania TER II: Less Developed Countr irael iragentina Iruguay arbados iorea, Republic of Cyprus	ies I 2 3 4 5 6	 2 3 4 5 8	 4 6 
Ilbania TER II: Less Developed Countr arael urgentina Iruguay arbados iorea, Republic of Lyprus ahamas	ies I 2 3 4 5 6 7	I 2 3 4 5 8 7	  4  4  6     8
Ilbania IER II: Less Developed Countr arael urgentina Iruguay arbados iorea, Republic of typrus ahamas Costa Rica	ies 1 2 3 4 5 6 7 8	 2 3 4 5 8 7 12	11 4 6 1 8 15
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Ilbania TER II: Less Developed Countr Iragua Iraguay arbados iorea, Republic of iorea, Republic of	ies 1 2 3 4 5 6 7 8 9 10 11 12 13	 2 3 4 5 8 7 12 6 11 18 9 17	11 4 6 1 8 15 30 28 2 39 13
Ilbania IER II: Less Developed Countr rael rrael Jruguay arbados corea, Republic of yprus ahamas costa Rica cazakhstan anama chile China Imaica fauritius	ies 1 2 3 4 5 6 7 8 9 10 11 12 13 14	 2 3 4 5 8 8 7 12 6 11 18 9 17 19	11 4 6 1 8 15 30 28 2 39 13 16
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Ilbania IER II: Less Developed Countr rael urgentina Jruguay arbados corea, Republic of Cyprus ahamas Costa Rica azakhstan anama chile China umaica fauritius uwait	ies 1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 14	1 2 3 4 5 8 7 12 6 6 11 11 18 9 17 19 16 9	11 4 4 8 8 15 30 28 2 39 13 16 18 37
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Ilbania TER II: Less Developed Countri rrael urgentina Iruguay arbados iorea, Republic of cyprus ahamas costa Rica azakhstan anama chile chile chile chile chile chile chile chile chila lauritius uwait razil hailand urmenia Jzbekistan ietnam eru	ies 1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 14 14 14 18 18 20 20	1 2 3 4 5 8 7 12 6 6 11 18 9 17 19 16 9 14 22 15 13 19	11 4 6 1 8 15 30 28 2 39 13 16 18 37 28 11 34 48 32
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Ilbania IER II: Less Developed Countri rael rrael Jruguay arbados corea, Republic of yprus ahamas costa Rica cazakhstan anama chile China maica fauritius Liuwait razil hailand urmenia Jzbekistan ietnam eru Dominican Republic rinidad and Tobago	ies 1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 14 14 14 17 18 18 20 20 23	1 2 3 4 5 8 7 7 12 6 11 18 8 9 17 19 16 9 17 19 16 9 14 22 15 13 19 222 30	11 4 6 1 8 15 300 28 2 2 39 13 16 18 37 28 11 34 48 32 23 13
Ilbania IER II: Less Developed Countr rael rrael Jruguay arbados corea, Republic of Cyprus ahamas Costa Rica cazakhstan anama Chile China maica fauritius Luwait razil hailand urmenia Jzbekistan fietnam eru Dominican Republic Cininda and Tobago Colombia	ies 1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 14 14 14 14 18 18 20 20 23 23 23	1 2 3 4 5 8 7 12 6 6 11 18 9 7 17 19 16 9 14 22 15 13 19 22 30 19	11 4 6 1 8 15 30 28 2 39 13 16 18 37 28 11 18 37 28 11 34 48 32 23 3 13 22
Ilbania IER II: Less Developed Countri irrael urgentina Irruguay arbados iorea, Republic of Cyprus ahamas Costa Rica iazakhstan anama Costa Rica iazakhstan anama Costa Rica iazakhstan anama Costa Rica iazakhstan ianama Costa Rica iazakhstan ianama iazakhstan iazakhstan iazakhstan iazakhstan iazakhstan iazakhstan iazakhstan iazakhstan iazakhstan ietnam eru Dominican Republic rinidad and Tobago Colombia ienzuela, Bolivarian Republic of	ies 1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 14 14 14 14 14 18 18 20 20 20 23 23 25	1 2 3 4 5 8 7 12 6 6 11 11 18 9 17 19 16 9 14 22 15 13 19 22 30 0 19 24	11 4 4 6 1 8 15 30 28 2 39 13 16 18 37 28 11 34 48 32 23 13 13 22 25
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Ilbania TER II: Less Developed Countri rael urgentina Jruguay arbados iorea, Republic of yprus ahamas iosta Rica azakhstan anama Chile C	I           2           3           4           5           6           7           8           9           10           11           12           13           14           17           18           20           20           20           20           20           23           23           25           26	1 2 3 4 5 8 7 12 6 6 11 18 9 17 19 16 9 14 22 15 13 19 22 30 19 22 30 19 22 4 28	11 4 4 6 1 8 15 30 28 2 39 13 16 18 37 28 11 34 48 32 23 13 22 5 20

Country	Mothers' Index Rank <sup>*</sup>	Women's Index Rank <sup>‰</sup>	Children's Index Rank <sup>**</sup>
TIER II: Less Developed Count	× *	,	
Malaysia	30	37	21
Kyrgyzstan Philippings	32 33	25 27	41 51
Philippines Iordan	34	47	10
El Salvador	35	34	38
Mongolia	35	28	44
Belize	37	39	27
Azerbaijan	38	31	47
Paraguay Georgia	39 39	44 41	26 31
Namibia	39	32	52
Iran, Islamic Republic of	42	45	24
Honduras	43	38	46
Algeria	44	48	36
United Arab Emirates	45	51	33
Turkey Gabon	46	54 40	18 53
Nicaragua	48	50	42
Tajikistan	49	45	54
Indonesia	50	43	55
Botswana	51	52	45
Kenya	52	36	60
Zimbabwe	53	49	56
Morocco Ghana	54 55	58 52	40 57
Oman	55	52	43
Guatemala	57	61	50
Saudi Arabia	58	62	49
Cameroon	59	55	63
Congo	59	56	59
India	61	60	61
Swaziland Papua New Guinea	62 63	63 57	58 66
Pakistan	64	65	62
Nigeria	65	64	65
Côte d'Ivoire TIER III: Least Developed Cou	66	66	64
Cape Verde			1
Uganda	2	2	9
Rwanda	3	4	10
Malawi	4	5	6
Lesotho Solomon Islands	5	7	5 2
Mozambigue	7	6	17
Tanzania, United Republic of	8	12	7
Bangladesh	9	9	11
Cambodia	10	3	27
Comoros	11	16	3
Gambia		17	4
	1.2		8
Nepal	13	14	14
Nepal Lao People's Democratic Republic	14	II	16 23
Nepal Lao People's Democratic Republic Burundi	14 15	11	23
Nepal Lao People's Democratic Republic	14	II	
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar	14 15 16 17 17	11 10 14 18 13	23 19
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia	14 15 16 17 17 19	11 10 14 18 13 20	23 19 14 24 12
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea	14 15 16 17 17 19 20	11 10 14 13 20 19	23 19 14 24 12 21
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo	4   15   16   17   17   19   20   21	11 10 14 18 13 20 19 22	23 19 14 24 12 21 15
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin	4   15   16   17   17   19   20   21   22	11 10 14 18 13 20 19 22 24	23 19 14 24 12 21 15 13
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo	4   15   16   17   17   19   20   21	11 10 14 18 13 20 19 22 24 21	23 19 14 24 12 21 15
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin Mali	14 15 16 17 17 20 21 22 23	11 10 14 18 13 20 19 22 24	23 19 14 24 12 21 15 13 29
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin Mali Djibouti Burkina Faso Ethiopia	14 15 16 17 17 19 20 21 22 23 23 24 25 26	11 10 14 18 13 20 19 22 24 21 28 23 24	23 19 14 24 12 21 15 13 29 18 26 30
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin Mali Djibouti Burkina Faso Ethiopia Eritrea	14 15 16 17 17 19 20 21 22 23 24 25 26 27	11 10 14 18 13 20 19 22 24 21 28 23 24 31	23 19 14 24 12 21 15 13 29 18 26 30 20
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin Mali Djibouti Burkina Faso Ethiopia Eritrea Angola	14 15 16 17 17 19 20 21 22 23 24 25 26 27 28	11 10 14 18 13 20 19 22 24 21 28 23 24 21 28 23 24 31 27	23 19 14 24 12 21 15 13 29 18 26 30 20 28
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin Mali Djibouti Burkina Faso Ethiopia Eritrea Angola Guinea-Bissau	14 15 16 17 19 20 21 22 23 24 25 26 27 28 29	11 10 14 18 13 20 19 22 24 21 28 23 24 31 27 30	23 19 14 24 21 15 13 29 18 26 30 20 20 28 25
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin Mali Djibouti Burkina Faso Ethiopia Eritrea Angola Guinea-Bissau Chad	14 15 16 17 19 20 21 22 23 24 25 26 27 28 29 30	11 10 14 18 13 20 19 22 24 21 28 23 24 31 27 30 26	23 19 14 24 12 21 15 13 29 18 26 30 20 28 25 32
Nepal Lao People's Democratic Republic Burundi Guinea Mauritania Madagascar Zambia Equatorial Guinea Togo Benin Mali Djibouti Burkina Faso Ethiopia Eritrea Angola Guinea-Bissau	14 15 16 17 19 20 21 22 23 24 25 26 27 28 29	11 10 14 18 13 20 19 22 24 21 28 23 24 31 27 30	23 19 14 24 21 15 13 29 18 26 30 20 20 28 25

\* Due to different indicator weights and rounding, it is possible for a country to rank high on the women's and children's indices but not score among the very highest countries in the overall *Mothers' Index*. For a complete explanation of the indicator weighting, please see the Methodology and Research Notes.

\*\* Rank for tiers I, II and III respectively are out of the 41, 66 and 33 countries included in the Mothers' Index.

## The Complete Mothers' Index 2007

TIER I		Women's Index								ildren's Ind	lex	Rankings			
Development Group		Health Status		Educational	Educational Economic Status Political Status					Children's Statu	JS	SOWM 2007			
MORE DEVELOPED COUNTRIES	Lifetime risk of maternal mortality (1 in number stated)	Percent of women using modern contraception	Female life expectancy at birth (years)	Status Expected number of years of formal female schooling	Maternity lea (200	4)	Ratio of estimated female to male earned income	Participation of women in national government (% seats held by women)	Under-5 mortality rate (per 1,000 live births)	Gross pre-primary enrollment ratio (% of total)	Gross secondary enrollment ratio (% of total)	Mothers' Index Rank (out of 41 countries) <sup>+</sup>	Women's Index Rank (out of 41 countries) <sup>+</sup>	Children's Index Rank (out of 43 countries) <sup>+</sup>	
	2000	2005	2006	2004*	length	% wages paid	2004	2007	2005	2004*	2004*				
Albania	610	8	77	12	365 days'	80, 50 (a)	0.54	7.1	18	49	78	41	41	43	
Australia	5,800	72	83	20	52 weeks	0	0.7	25	6	102	149	5	4	28	
Austria	16,000	47	82	15	16 weeks	100	0.44	32	5	89	101	17	25	8	
Belarus	I,800	42	74	15	126 days	100	0.64	29	12	104	93	30	29	32	
Belgium	5,600	74	83	16	15 weeks	82, 80 (b,c)	0.63	35	5	116	109	8	9	8	
Bosnia and Herzegovina	1,900	16	77	—	l year	100	0.65	14	15	—	—				
Bulgaria	2,400	26	76	13	135 days	90	0.65	22	15	78	102	35	32	34	
Canada	8,700	73	83	16	17-18 weeks	55	0.63	21	6	68	109	15	12	25	
Croatia	6,100	—	79	13	I+ year	100	0.67	22	7	47	88	34	26	35	
Czech Republic	7,700	63	79	15	28 weeks	69	0.51	16	4	107	96	24	31	7	
Denmark	9,800	72	80	17	18 weeks (z)	90 (c,z)	0.73	37	5	91	124	6	7	18	
Estonia	1,100	56	78	17	140 days'	100	0.62	19	7	114	98	17	19	14	
Finland	8,200	75	82	18	105 days''	100 (c,z)	0.71	38	4	59	109	7	6	21	
France	2,700	69	83	16	16 weeks	100 (c)	0.64	12	5	114	111	13	15	10	
Germany	8,000	72	82	16	14 weeks	100	0.58	32	5	97	100	10	13	3	
Greece	7,100	_	81	16	119 days	100	0.55	13	5	66	96	23	23	19	
Hungary	4,000	68	78	15	—	_	0.64	10	8	81	97	26	24	26	
Iceland	0	_	83	19	3 months	80	0.71	33	3	94	108	2	2	2	
Ireland	8,300	_	81	18	18 weeks	70	0.51	13	6	_	112	22	18	27	
Italy	13,900	39	83	16	5 months	80	0.46	17	4	103	99	19	27	I	
Japan	6,000	51	86	15	14 weeks	60	0.44	9	4	85	102	29	33	4	
Latvia	I,800	39	78	16	112 days <sup>1</sup>	100	0.67	19	П	79	97	25	20	33	
Lithuania	4,900	31	78	17	126 days	100	0.69	25	9	64	102	20	14	29	
Luxembourg	1,700	_	82	14	16 weeks	100	0.49	23	5	83	95	33	33	16	
Macedonia, the former Yugoslav Republic of	2,100	_	77	12	9 months	(g)	0.48	28	17	32	84	40	39	42	
Malta	2,100	_	81	15	14 weeks	100	0.48	9	6	104	105	31	35	6	
Moldova, Republic of	1,500	43	73	12	126 days'	100	0.63	22	16	56	83	39	38	41	
Montenegro ‡	4,500	33	76	13	_		_	9	15	44	89			38	
Netherlands	3,500	76	81	16	16 weeks	100	0.63	37	5	89	119		8	23	
New Zealand	6,000	72	82	21	14 weeks	100 (c)	0.7	32	6	92	118	4	3	20	
Norway	2,900	69	82	18	42-52 weeks	80,100 (d)	0.75	38	4	85	116	3	5	12	
Poland	4,600	19	79	16	16 weeks	100	0.59	20	7	53	97	32	30	31	
Portugal	11,100	33 (x)	81	16	120 days	100	0.59	21	5	76	97	21	22	17	
Romania	1,300	33 (x) 30	76	14	120 days	85	0.65		19	76	85	38	36	40	
Russian Federation	1,300		78	14	140 days	100	0.62	10	19	85	93	36	37	37	
Serbia ‡	4,500	33	72	14			0.82	20	15	44	89		57	37	
Slovakia	19,800	41	78	13	 28 weeks	55	0.58	20	8	92	94	28	28	24	
Slovakia	4,100	59	81	14	105 days	100	0.58	12	8	59	94	16	15	15	
		67							5			9			
Spain	17,400		84	17	16 weeks	100	0.5	36		111	119		10	11	
Sweden	29,800	72 (z)	83	17	14 weeks	100, 80 (e)	0.81	47	4	85	103	1	17	4	
Switzerland	7,900	78	84	15	98 days	80	0.61	25	5	95	93	14	17	13	
Ukraaine	2,000	38	73	14	126 days	00 (( -)	0.53	9	17	82	93	37	40	36	
United Kingdom	3,800	81 (h)	81	17	26 weeks	90 (f, z)	0.65	20	6	59	105	12	11	21	
United States	2,500	71	80	16	12 weeks	0	0.62	16.3	7	62	95	26	21	30	

TIER II		Women's Index						Children's Index					Rankings		
Development Group		Health	Status		Educational	Economic	Political		C	hildren's Stat	us			SOWM 2007	
LESS DEVELOPED COUNTRIES and TERRITORIES (minus least developed countries)	Lifetime risk of maternal mortality (I in number stated) 2000	Percent of births attended by skilled health personnel 2005*	Percent of women using modern contraception 2005	Female life expectancy at birth (years)	Status Expected number of years of formal female schooling	Status Ratio of estimated female to male earned income	Status Participation of women in national government (% seats held by women) 2007	Under-5 mortality rate (per 1,000 live births) 2005	Percent of children under 5 moderately or severely underweight for age 2005*	Gross primary enrollment ratio (% of total) 2005*	Gross secondary enrollment ratio (% of total) 2005*	Percent of population with access to safe water 2004	Mothers' Index Rank (out of 66 countries) <sup>+</sup>	Women's Index Rank (out of 66 countries) <sup>+</sup>	Children's Index Rank (out of 79 countries) <sup>+</sup>
AL				2006	2005*	2004								10	10
Algeria	190	96	50	73	13	0.33	6	39	10	112	81	85	44	48	40
Argentina	410	99	-	79	16	0.53	35	18	4	112	86	96		2	14
Armenia	1,200	98	22	75	12	0.63	5	29	4	101	91	92		22	14
Azerbaijan	520	88	12	71	11	0.64		89	7	97	83	77	38	31	57
Bahamas	580	99	60	74	12	0.7	20	15	_	98	88	97		7	10
Bahrain	1,200	98	31	76	15	0.33	3	11	9	104	99	—	29	32	11
Barbados	590	100	53	79	15	0.61(x)	13	12	6 (z)	107	110	100		4	5
Belize	190	83	42	74	13	0.39	7	17	6 (z)	124	85	91	37	39	32
Bolivia	47	67	35	67	—	0.57	17	65	8	113	89	85			42
Botswana	200	94	39	33	12	0.36	П	120	13	105	75	95		52	57
Brazil	140	97	70	75	14	0.57	9	33	6	141	102	90		9	43
Brunel Darussalam	830	99	—	80	14	—	—	9	—	109	94	—			
Cameroon	23	62	13	46	9	0.49	9	149	18	117	44	66		55	76
Chile	1,100	100	—	81	14	0.39	15	10	I	104	89	95		18	2
China	830	97	83	74	П	0.64	20	27	8	118	73	77	12	9	47
Colombia	240	96	64	76	12	0.58	8	21	7	111	75	93	23	19	26
Congo	26	86	—	54	7	0.5	9	108	15	89	39	58		56	72
Costa Rica	690	99	71	81	12	0.46	39	12	5	112	77	97		12	18
Côte d'Ivoire	25	68	7	47	5	0.32	9	195	17	72	25	84	66	66	77
Cuba	I,600	100	72	80	14	—	36	7	4	100	93	91			7
Cyprus	890	100(z)		82	14	0.59	14	5	—	98	98	100		8	I
Dominican Republic	200	99	66	72	13	0.42	20	31	5	112	68	95		22	27
Ecuador	210	75	50	78	—	0.55	25	25	12	117	61	94			46
Egypt	310	74	57	73	—	0.23	2	33	6	101	87	98			13
El Salvador	180	92	61	75	12	0.43	17	27	10	114	60	84	35	34	44
Fiji	360	99	_	71	14	0.48	_	18	8 (z)	106	88	47			48
Gabon	37	86	12	54	12	0.57	13	91	12	130	50	88		40	66
Georgia	1,700	92	20	75	12	0.37	9	45	3	95	82	82		41	35
Ghana	35	47	19	58	7	0.71	П	112	22	88	44	75		52	70
Guatemala	74	41	34	72	9	0.32	8	43	23	113	49	95	57	61	61
Guyana	200	86	36	68		0.41	29	63	14	129	90	83			64
Honduras	190	56	51	71	12	0.45	23	40	17	113	65	87	43	38	56
India	48	43	43	66	9	0.31	8	74	47	116	54	86	61	60	74
Indonesia	150	72	57	70	12	0.45	П	36	28	117	64	77		43	68
Iran, Islamic Republic of	370	90	56	73	12	0.38	4	36	П	103	82	94	42	45	28
Iraq	65	72	10	62	8	_	26	125	12	98	45	81			65
Israel	1,800	99(z)	52	82	16	0.64	14	6	_	110	93	100		I	4
Jamaica	380	97	63	73	12	0.57	12	20	4	95	88	93	13	17	16
Jordan	450	100	41	74	13	0.3	6	26	4	98	87	97	34	47	12
Kazakhstan	190	99	53	70	15	0.63	10	73	4	109	98	86		6	36
Kenya	19	42	32	48	10	0.83	7	120	20	111	48	61	52	36	73
Korea, Democratic People's Republic of	590	97	52	67			20	55	23	_		100		50	, ,
Korea, Republic of	2,800	100	67	82	15	0.46	13	5		105	93	92		5	8
Kuwait	6,000	98	41	80	13	0.46	2		10	96	90	72 —		16	21

## The Complete Mothers' Index 2007

TIER II		Women's Index								Children's Index					Rankings		
Development Group		Health	Status		Educational Status	Economic Status	Political Status		С	hildren's Stat	us			SOWM 2007			
LESS DEVELOPED COUNTRIES and TERRITORIES (minus least developed countries)	Lifetime risk of maternal mortality (1 in number stated)	Percent of births attended by skilled health personnel	Percent of women using modern contraception	Female life expectancy at birth (years)	Expected number of years of formal female schooling	Ratio of estimated female to male earned income	Participation of women in national government (% seats held by women)	Under-5 mortality rate (per 1,000 live births)	Percent of children under 5 moderately or severely underweight for age	Gross primary enrollment ratio (% of total)	Gross secondary enrollment ratio (% of total)	Percent of population with access to safe water	Mothers' Index Rank (out of 66 countries) <sup>+</sup>	Women's Index Rank (out of 66 countries) <sup>+</sup>	Children's Index Rank (out of 79 countries) <sup>+</sup>		
	2000	2005*	2005	2006	2005*	2004	2007	2005	2005*	2005*	2005*	2004					
Kyrgyzstan	290	98	49	72	13	0.58	0	67	П	98	88	77	32	25	50		
Lebanon	240	89	37	75	14	0.31	5	30	4	107	89	100		41	9		
Libyan Arab Jamahiriya	240	94	26	77	17	—	8	19	5	112	104	72 (z)			31		
Malaysia	660	97	30	78	14	0.36	9	12	П	93	76	99		37	25		
Mauritius	1,700	98	49	76	13	0.4	17	15	15	102	88	100		19	19		
Mexico	370	83	60	78	13	0.39	23	27	8	109	80	97	26	28	24		
Mongolia	300	97	54	67	13	0.51	7	49	7	104	90	62		28	54		
Morocco	120	63	55	73	9	0.25	Ш	40	10	106	48	81	54	58	48		
Namibia	54	76	43	46	П	0.57	27	62	24	101	58	87		32	63		
Nicaragua	88	67	66	73	П	0.32	15	37	10	112	64	79		50	50		
Nigeria	18	35	8	44	8	0.41	6	194	29	99	35	48		64	78		
Occupied Palestinian Territory	140	97	_	75	14	_	—	23	5	93	94	92			21		
Oman	170	95	18	76	П	0.18	2	12	18	87	86	79 (z)	55	59	52		
Pakistan	31	31	20	64	5	0.29	21	99	38	82	27	91	64	65	75		
Panama	210	93	54 (z)	78	14	0.56	17	24	8	112	70	90		П	33		
Papua New Guinea	62	41	20	57	6	0.73	I	74	35 (z)	75	26	39	63	57	79		
Paraguay	120	77	61	74	12	0.41	10	23	5	106	63	86		44	30		
Peru	73	73	50	74	14	0.41	29	27	8	114	92	83		19	37		
Philippines	120	60	33	73	12	0.6	15	33	28	112	86	85	33	27	62		
Qatar	3,400	99	32	77	13	—	0	21	6	102	97	100			3		
Saudi Arabia	610	91	29	75	10	0.15	0	26	14	67	68	95		62	60		
Singapore	1,700	100	53	81	—	0.51	25	3	3	—	—	100					
South Africa	120	92	55	45	13	0.45	33	68	12	105	90	88	27	25	40		
Sri Lanka	430	96	50	78	_	0.42	5	14	29	98	83	79			55		
Suriname	340	85	41	73	13	—	26	39	13	120	73	92			52		
Swaziland	49	74	26	29	9	0.29	П	160	10	101	42	62	62	63	71		
Syrian Arab Republic	130	77	28	76	—	0.33	12	15	7	123	63	93			45		
Tajikistan	250	71	27	67	10	0.57	18	71	—	100	82	59		45	67		
Thailand	900	99	70	75	12	0.59	9	21	18	97	73	99		14	34		
Trinadad and Tobago	330	96	33	73	13	0.46	19	19	6	102	84	91	23	30	16		
Tunisia	320	90	53	76	14	0.28	23	24	4	110	81	93		34	20		
Turkey	480	83	38	72	10	0.35	4	29	4	93	79	96		54	21		
Turkmenistan	790	97	53	67	_	0.64	16	104	12	_		72					
United Arab Emirates	500	99	24	82	П	0.24	23	9	14	84	66	100		51	38		
Uruguay	1,300	100	_	80	16	0.55	П	15	5	109	108	100		3	5		
Uzbekistan	1,300	96	63	70	П	0.6	18	68	8	100	95	82		15	39		
Venezuela, Bolivarian Republic of	300	95	_	77	12	0.51	18	21	5	105	72	83	25	24	29		
Vietnam	270	85	57	74	10	0.71	27	19	27	98	73	85		13	59		
Zimbabwe	16	73	50	36	9	0.58	17	132	17	96	36	81	53	49	69		

\* Data refer to 2005 or the most recent year available, with the exception of Tier I in which data for educational indicators are for 2004 or most recent year. + The *Mothers' Index* ranks and *Women's Index* ranks are out of the number of countries for which sufficient data were available, as specified for each tier in the column headings. The *Children's Index* ranks include additional countries for which adequate data existed to present findings on children's indicators, but not on women's indicators.

‡ Due to the cession in June 2006 of Montenegro from the State Union of Serbia and Montenegro, disaggregated data for Montenegro and Serbia are not yet available. With the exception of data on the participation of women in national government, data presented are pre-cession aggregates.

— No data. 'calendar days — ''working days (all other days unspecified).

(a) 80% prior to birth and for 150 days, and 50% for the rest of the leave period; (b) 4 weeks at 82% of pay and 11 weeks at 79.5% of pay; (c) Up to a ceiling; (d) 80% for 42-week option; 100% for 52-week option; (e) 480 calendar days paid parental leave: 80% for 390 days; flat rate for remaining 90 days; (f) 90% for the first 6 weeks, flat rate after at approximately 1/3 national average weekly pay for women; (g) Paid, amount not specified (h) Data excludes Northern Ireland; (z) Data are from a different source and/or year.

TIER III		Women's Index							Chi	ildren's In	dex		Rankings		
Development Group		Health	Status		Educational Status	Economic Status	Political Status		C	hildren's Stat	us			SOWM 2007	
LEAST DEVELOPED COUNTRIES	Lifetime risk of maternal mortality (1 in number stated)	Percent of births attended by skilled health personnel	Percent of women using modern contraception	Female life expectancy at birth (years)	Expected number of years of formal female schooling	Ratio of estimated female to male earned income	Participation of women in national government (% seats held by women)	Under-5 mortality rate (per 1,000 live births)	Percent of children under 5 moderately or severely underweight for age	Gross primary enrollment ratio (% of total)	Ratio of girls to boys enrolled in primary school	Percent of population with access to safe water	Mothers' Index Rank (out of 33 countries) <sup>+</sup>	Women's Index Rank (out of 33 countries) <sup>+</sup>	Children's Index Rank (out of 42 countries) <sup>+</sup>
	2000	2005*	2005	2006	2005*	2004	2007	2005	2005*	2005*	2005*	2004			
Afghanistan	6	14	4	47	4	—	27	257	39	93	0.44	39			41
Angola	7	45	5	43	3	0.62	15	260	31	64	0.86	53		27	35
Bangladesh	59	13	47	65	9	0.46	15	73	48	109	1.03	74		9	12
Benin	17	66	7	56	6	0.48	7	150	23	99	0.77	67	22	24	15
Bhutan	37	37	19	66	—	—	3	75	19	—	—	62			
Burkina Faso	12	38	9	49	4	0.66	12	191	38	53	0.78	61	25	23	33
Burundi	12	25	10	46	5	0.78	31	190	45	80	0.83	79		10	25
Cambodia	36	32	19	61	9	0.74	10	143	45	137	0.92	41		3	34
Cape Verde	160	89	46	74	П	0.35	15	35	14 (z)	111	0.95	80		I	I
Central African Republic	15	44	7	40	—	0.61	Ш	193	24	56	0.66	75			27
Chad	H	14	2	54	4	0.65	7	208	37	80	0.65	42		26	40
Comoros	33	62	19	67	7	0.51	3	71	25	85	0.88	86		16	4
Congo, Democratic Republic of the	13	61	4	54	—	0.52	8	205	31	62	0.78	46			35
Djibouti	19	61	—	55	3	0.49	П	133	27	39	0.79	73		28	21
Equatorial Guinea	16	65	—	42	8	0.43	18	205	19	127	0.91	43		19	30
Eritrea	24	28	5	57	5	0.39	22	78	40	64	0.81	60	27	31	23
Ethiopia	14	6	6	49	5	0.6	22	164	38	93	0.86	22		24	38
Gambia	31	55	9	58	8	0.53	9	137	17	81	1.06	82		17	5
Guinea	18	56	4	54	6	0.68	19	150	26	79	0.81	50	16	14	26
Guinea-Bissau	13	35	4	47	4	0.51	14	200	25	70	0.67	59	29	30	32
Haiti	29	24	22	53		0.52	4	120	17	—	—	54			
Lao People's Democratic Republic	25	19	29	57	8	0.52	25	79	40	116	0.88	51		Ш	20
Lesotho	32	55	30	35	П	0.53	24	132	20	131	1.00	79		7	7
Liberia	16	51	6	43	8	—	13	235	26	99	0.73	61			29
Madagascar	26	51	17	57	6	0.7	7	119	42	134	0.96	50	17	13	28
Malawi	7	56	26	40	9	0.73	14	125	22	125	1.02	73		5	10
Maldives	140	70	33	68	П	—	12	42	30	104	0.97	83			2
Mali	10	41	6	49	5	0.67	10	218	33	64	0.79	50	23	21	35
Mauritania	14	57	5	56	7	0.5	18	125	32	94	0.98	53	17	18	17
Mozambique	14	48	12	42	7	0.81	35	145	24	95	0.83	43		6	23
Myanmar	75	57	33	64	7	—	-	105	32	100	1.02	78			6
Nepal	24	П	35	63	8	0.5	17	74	48	113	0.91	90		14	8
Niger	7	16	4	45	3	0.57	12	256	40	45	0.72	46	33	33	41
Rwanda	10	39	4	46	8	0.74	49	203	23	119	1.02	74		4	14
Senegal	22	58	8	58	—	0.53	19	136	17	76	0.95	76			9
Sierra Leone	6	42	4	43	6	0.45	15	282	27	145	0.72	57		29	39
Solomon Islands	120	85	—	64	8	0.5	0	29	21 (z)	95	0.94	70		8	3
Somolia	10	25	—	49	—	—	8	225	26	—	—	29			
Sudan	30	87	7	58	—	0.25	18	90	41	60	0.87	70			19
Tanzania, United Republic of	10	43	17	46	5	0.73	30	122	22	106	0.96	62		12	П
Timor-Leste	30	18	9	58	—	—	25	61	46	146	—	58			30
Togo	26	61	9	57	7	0.43	9	139	25	101	0.84	52		22	18
Uganda	13	39	18	51	10	0.7	30	136	23	118	1.00	60		2	13
Yemen	19	27	10	63	7	0.3	0	102	46	87	0.71	67		32	22
Zambia	19	43	23	38	6	0.55	15	182	20	99	0.96	58		20	16

### Methodology and Research Notes

### **COMPLETE MOTHERS' INDEX**

1. In the first year of the Mothers' Index (2000), a review of literature and consultation with members of the Save the Children staff identified health status, educational status, political status and children's wellbeing as key factors related to the well-being of mothers. This year's Mothers' Index also includes economic status. All countries with populations over 250,000 were divided into one of three tiers according to United Nations development groups: more developed countries, less developed countries and least developed countries. Indicators were selected for each development group to represent these factors and published data sources for each indicator were identified. To facilitate international comparisons, in addition to reliability and validity, indicators were selected based on inclusivity (availability across countries) and variability (ability to differentiate). To adjust for variations in data availability when calculating the final Index, the indicators for maternal health and children's well-being were grouped into sub-indices (see step 6). This procedure allowed researchers to draw on the wealth of useful information on those topics without giving too little weight to the factors for which less abundant data were available. Data presented in this report include information available through March 1, 2007.

Sources: 2007 population: United Nations Department of Economic and Social Affairs, Population Division. World Population Prospects:The 2006 Revision. www.un.org/esa/population/publications/wpp2006/wpp2006.htm. UN country classifications by development level: United Nations Department of Economic and Social Affairs, Population Division. World Population Prospects:The 2006 Revision. esa.un.org/unpp/index.asp?panel=9

2. In Tier I, data were gathered for seven indicators of women's status and three indicators of children's status. Sufficient data existed to include analyses of two additional indicators of children's well-being in Tiers II and III. Indicators unique to specific development groups are noted.

### THE INDICATORS THAT REPRESENT WOMEN'S HEALTH STATUS ARE:

### Lifetime risk of maternal mortality

A woman's risk of death in childbirth over the course of her life is a function of many factors, including the number of children she has and the spacing of the births as well as the conditions under which she gives birth and her own health and nutritional status. Calculations are based on maternal mortality and fertility rate in a country. Some country estimates are derived using a WHO/UNICEF methodology.

**Source:** Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA. www.who.int/reproductivehealth/publications/

 $maternal\_mortality\_2000/mme.pdf$ 

#### Percent of women using modern contraception

Access to family planning resources, including modern contraception, allows women to plan their pregnancies. This helps ensure that the mother is physically and psychologically prepared to give birth and care for her child. Data are derived from sample survey reports and estimate the proportion of married women (including women in consensual unions) currently using modern methods of contraception (including male and female sterilization, IUD, the pill, injectables, hormonal implants, condoms and female barrier methods). Contraceptive prevalence data refer to the most recent available as of October 1, 2005. **Source:** United Nations Department of Economic and Social Affairs, Population Division. *World Contraceptive Use 2005* (wall chart). www.un.org/esa/population/publications/contraceptive2005/WCU2005.htm

#### Skilled attendant at delivery

The presence of a skilled attendant at birth reduces the likelihood of both maternal and infant mortality. The attendant can help create a hygienic environment and recognize complications that require urgent medical care. Skilled attendant at delivery is defined as those births attended by physicians, nurses or midwives. Data are from 1997-2005. As nearly every birth is attended in the more developed countries, this indicator is not included in Tier I. **Source:** UNICEF. *State of the World's Children 2007* (Table 8). www.unicef.org/sowc07/docs/sowc07\_table\_8.xls

#### Female life expectancy

Children benefit when their mothers live longer, healthier lives. Life expectancy reflects the health, social and economic status of a mother and captures trends in falling life expectancy associated with the feminization of AIDS. Female life expectancy is defined as the average number of years of life that a female can expect to live if she experiences the current mortality rate of the population at each age. Data estimates are for 2006. **Source:** United Nations Population Fund (UNFPA). *The State of World Population 2006:A Passage to Hope:Women and International Migration.* www.unfpa.org/swp/2006/english/notes/indicators.html

### THE INDICATOR THAT REPRESENTS WOMEN'S EDUCATIONAL STATUS IS:

### Expected number of years of formal schooling for females

Education is singularly effective in enhancing maternal health, women's freedom of movement and decision-making power within households. Educated women are more likely to be able to earn a livelihood and support their families. They are also more likely than uneducated women to ensure that their children eat well, finish school and receive adequate health care. Female school life expectancy is defined as the number of years a female child of school entrance age is expected to spend at school or university, including years spent on repetition. It is the sum of the age-specific enrollment ratios for primary, secondary, post-secondary non-tertiary and tertiary education. Data are from 2005 or most recent year available.

Source: UNESCO Institute for Statistics. stats.uis.unesco.org/TableViewer/tableView.aspx?ReportId=238

## THE INDICATORS THAT REPRESENT WOMEN'S ECONOMIC STATUS ARE:

### Ratio of estimated female-to-male earned income

Mothers are likely to use their influence and the resources they control to address the needs of their children. Where mothers are able to earn a decent standard of living and wield power over economic resources, children survive and thrive. The ratio of estimated female earned income to estimated male earned income – how much women earn relative to men for equal work – reveals gender inequality in the workplace. Female and male earned income are crudely estimated based on the ratio of the female non-agricultural wage to the male non-agricultural wage, the female and male shares of the economically active population, the total female and male population and GDP per capita in purchasing power parity terms in United States dollars. Estimates are based on data for the most recent year available during 1991-2004.

Source: United Nations Development Programme. Human Development Report 2006: Beyond Scarcity: Power, Poverty, and the Global Water Crisis (Table 25). hdr.undp.org/hdr2006/statistics/indicators/234.html

### Maternity leave benefits

The maternity leave indicator includes both the length of time for which benefits are provided as well as the extent of compensation. The data were compiled by the International Labour Organization, based on information provided by countries from 1998 to 2004. Data on maternity leave benefits are reported for more developed countries only, where women comprise a considerable share of the non-agricultural workforce and therefore most working mothers can enjoy the benefits of maternity leave.

Source: Statistics and Indicators on Women and Men (Table 5g). Updated August 28, 2006 unstats.un.org/unsd/demographic/products/indwm/tab5g.htm>

### THE INDICATOR THAT REPRESENTS WOMEN'S POLITICAL STATUS IS:

#### Participation of women in national government

When women have a voice in public institutions, they can participate directly in governance processes and advocate for issues of particular importance to women and children. This indicator represents the current percentage of seats in national legislatures or parliaments (lower or single house) occupied by women.

Source: Inter-Parliamentary Union. Women in National Parliament: Situation as of 28 February 2007. www.ipu.org/wmn-e/classif.htm

### THE INDICATORS THAT REPRESENT CHILDREN'S WELL-BEING ARE:

#### Under-5 mortality rate

Under-5 mortality rates are likely to increase dramatically when mothers receive little or no prenatal care and give birth under difficult circumstances, when infants are not exclusively breastfed, few children are immunized and fewer receive preventive or curative treatment for common childhood diseases. Under-five mortality rate is the probability of dying between birth and exactly five years of age, expressed per 1,000 live births. Data are from 2005.

Source: UNICEF. State of the World's Children 2007 (Table 1). www.unicef.org/sowc07/docs/sowc07\_table\_1.xls

### Percent of children under age 5 moderately or severely underweight

Poor nutrition affects children in many ways, including making them more susceptible to a variety of illnesses and impairing their physical and cognitive development. Children moderately or severely underweight are more than two or three standard deviations below median weight for age of the reference population, respectively. Data are from 1996-2005. This indicator is included in Tier II and Tier III only, since few more developed countries report these statistics. **Source:** UNICEF. *State of the World's Children 2007* (Table 2). www.unicef.org/sowc07/docs/sowc07\_table\_2.xls

### Gross pre-primary enrollment ratio

Early childhood care and education, including preprimary schooling, supports children's growth, development, learning and survival. It also contributes to health, poverty reduction and can provide essential support for working parents, particularly mothers. The pre-primary gross enrollment ratio is the total number of children enrolled in pre-primary education, regardless of age, expressed as a percentage of the total number of children of official pre-primary school age. Data are from 2004 or most recent year available. Pre-primary enrollment is analyzed for Tier I countries only. **Source:** UNESCO Institute for Statistics. www.uis.unesco.org

### Gross primary enrollment ratio

The gross primary enrollment ratio (GER) is the total number of children enrolled in primary school, regardless of age, expressed as a percentage of the total number of children of official primary school age. GERs can be higher than 100 percent when children enter school later than the official enrollment age or do not advance through the grades at the expected rate. Data are from the 2003/2004 school year or most recent year available. This indicator is not tracked in Tier I, where nearly all children complete primary school. **Source:** UNESCO Institute for Statistics. www.uis.unesco.org

#### Gender parity index

Educating girls is one of the most effective means of improving the well-being of women and children. The ratio of gross enrollment of girls to boys in primary school - or gender parity index (GPI) - measures gender disparities in primary school enrollment. It is calculated as the number of girls enrolled in primary school for every 100 enrolled boys, regardless of age. A score of 1 means equal numbers of girls and boys are enrolled; a score between 0 and 1 indicates a disparity in favor of boys; a score greater than 1 indicates a disparity in favor of girls. Data are for 1999-2005. GPI is included in Tier III, where gender equity gaps disadvantaging girls in access to education are the greatest in the world. Source: UNESCO Institute for Statistics. Global Education Digest 2006: Comparing Education Statistics Across the World (Table 5). www.uis.unesco.org/ev\_en.php?ID=6827\_201&ID2=DO\_TOPIC

#### Gross secondary enrollment ratio

The gross secondary enrollment ratio (GER) is the total number of children enrolled in secondary school, regardless of age, expressed as a percentage of the total number of children of official secondary school age. This indicator is not tracked in Tier III, where many children still do not attend primary school, let alone transition to secondary school.

Source: UNESCO Institute for Statistics. www.uis.unesco.org



TAJIKISTAN

### Percent of population with access to safe water

Safe water is essential to good health. Families need an adequate supply for drinking, as well as cooking and washing. Access to safe and affordable water also brings gains for gender equity, especially in rural areas where women and young girls spend considerable time collecting water. This indicator reports the percentage of the population with access to an adequate amount of water from an improved source within a convenient distance from a user's dwelling, as defined by country-level standards. "Improved" water sources include household connections, public standpipes, boreholes, protected dug wells, protected springs and rainwater collection. In general, "reasonable access" is defined as at least 20 liters (5.3 gallons) per person per day, from a source within one kilometer (.62 miles) of the user's dwelling. Data are from 2004. Source: UNICEF. State of the World's Children 2007 (Table 3). www.unicef.org/sowc07/docs/sowc07\_table\_3.xls

3. Missing data were supplemented, where possible, with data from the same source published the previous year.

4. Standard scores, or z-scores, were created for each of the indicators using the following formula:

$$Z = \frac{X - \overline{X}}{S}$$

where Z = The standard, or Z-score

X =The score to be converted

- $\overline{X}$ = The mean of the distribution
- S = The standard deviation of the distribution

5. The standard scores of indicators of ill-being were then multiplied by (-1) so that a higher score indicated increased well-being on all indicators.

### Notes on specific indicators

- Countries reporting a lifetime risk of maternal mortality of zero were given z-scores of 3.94 (1 in 30,000, thereby providing a marginal lead on Sweden's 29,800), the lowest risk for which a z-score could be calculated.
- For cross-country comparison, length of maternity leave was converted into days. For countries reporting the percentage of wages covered as a "flat rate" for some duration of leave, 33.3 percent (equivalent to the United Kingdom's flat rate) was used as a place holder to calculate z-scores.
   Source: UK flat rate: www.emplaw.co.uk
- To avoid rewarding school systems where pupils do not start on time or fail to progress through the system at expected rates, gross enrollment ratios (GERs) between 100 and 105 percent were discounted to 100 percent. Gross enrollment ratios over 105 percent were discounted to 100 and any amount over 105 percent was subtracted from 100 (for example, a country with a gross enrollment rate of 107 percent would be discounted to 100-(107-105), or 98). In Tier I, GERs over 105 percent were discounted to their respective country's net enrollment ratio.
- To avoid rewarding countries in which girls' educational progress is made at the expense of boys', countries with gender parity indices greater than 1.02 (an indication of gender inequity disfavoring boys), were discounted to 1.00, with any amount over 1.02 then subtracted from 1.00.

6. The z-scores of the four indicators related to women's health were averaged to create an index of women's health. In Tier I, an index of women's economic status was similarly calculated as a weighted average of the ratio of female-to-male earned income (75 percent), length of maternity leave (12.5 percent) and percent of wages paid (12.5 percent). An index of child well-being the Children's Index - was also created by first averaging indicators of education into one composite z-score, then averaging across all z-scores. At this stage, countries missing more than one indicator in any sub-index were eliminated from the sample. Countries missing any one of the other indicators (that is, educational, economic or political status) were also eliminated. A Women's Index was then calculated as a weighted average of health status (30 percent), educational status (30 percent), economic status (30 percent) and political status (10 percent).

7. The *Mothers' Index* was calculated as a weighted average of children's well-being (30 percent), women's health status (20 percent), women's educational status (20 percent), women's economic status (20), and women's political status (10 percent). The scores on the *Mothers' Index* were then ranked.

NOTE: Data exclusive to mothers are not available for many important indicators (for example, school life expectancy, government positions held). In these instances, data on women's status have been used to approximate maternal status, since all mothers are women. In areas such as health, where a broader array of indicators is available, the *Index* emphasizes indicators that address uniquely maternal issues.

8. Data analysis was conducted using Microsoft Excel and SPSS software.

### CHILD SURVIVAL PROGRESS RANKINGS

The Progress Rankings assess and rank progress in child survival from 1990 to 2005 for a subset of 60 priority countries with the highest numbers and/or rates of under-5 mortality, as identified by the Countdown to 2015. All countries with at least 50,000 child deaths or a rate of 90 under-5 deaths per thousand live births in 2004 were included in the rankings. This second criterion ensured that countries with small populations but high mortality rates were not overlooked. Together, the 60 priority countries represent almost 500 million children over 75 percent of all children under 5 alive in 2004. They also represent 94 percent of all deaths among children under 5 in that year. Under-5 mortality rates for 1990 and 2005, as well as the percentage change in under-5 mortality rates (U5MR) from 1990 to 2005, used in this analysis are from UNICEF's State of the World's Children 2007.

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### REPORT CARD: 5 WAYS TO SAVE CHILDREN UNDER AGE 5

The *Report Card* analyzes coverage rates across five effective and affordable child survival interventions available to prevent or treat the main causes of under-5 deaths in 60 child survival priority countries. All coverage figures used in the *Report Card* are from UNICEF's *State of the World's Children 2007* and represent the most recent and reliable estimates available.

### 5 LOW-COST SOLUTIONS TO SAVE CHILDREN ARE:

#### Skilled attendant at delivery

A child is at greatest risk of death on his or her first day of life. The presence of a skilled attendant at birth reduces the likelihood of both maternal and infant mortality. The attendant can help create a hygienic environment and recognize complications that require urgent medical care. Skilled attendant at delivery is defined as those births attended by physicians, nurses or midwives. Data are from 1997-2005.

#### **Exclusive breastfeeding**

Undernutrition is an underlying cause of more than half of all child deaths worldwide. Undernourished children are more susceptible to infection and are more likely to become severely ill and die from common childhood diseases like diarrhea and pneumonia. For those who survive, frequent illness can have detrimental effects on healthy growth and development. Proper nutrition begins with breastfeeding. This indicator measures the proportion of children who are exclusively breastfed for their first six months of life. Data are from1996-2005.

#### Measles immunization

Vaccination is one of the most important and costeffective interventions national health systems can provide, and yet measles remains a leading cause of vaccinepreventable death. This indicator reports the proportion of 1-year-olds immunized against measles. Data are from 2005.

### METHODOLOGY AND RESEARCH NOTES

### Oral rehydration therapy (ORT) for treatment of diarrhea

Diarrhea is a major cause of under-5 deaths worldwide. Many of these deaths can be easily prevented with oral rehydration therapy. This coverage indicator reports the proportion of children (0-4) with diarrhea (in the two weeks preceding the survey) receiving either oral rehydration therapy (oral rehydration solutions or recommended homemade fluids) or increased fluids and continued feeding. Data are from 1998-2005.

### Care-seeking for pneumonia

Pneumonia is the single leading cause of child death. It can be prevented with immunization and proper nutrition and treated with antibiotics. Care-seeking is used as a proxy for the proportion of children with pneumonia who receive antibiotic treatment, as few countries report actual treatment statistics. Care-seeking for pneumonia is defined as the proportion of children (0-4 years) with suspected pneumonia (cough and fast or difficult breathing in the two weeks preceding the survey) who were taken to a trained health-care provider for care. Data are from 1999-2005.

Each indicator was scored based on a three-pronged categorization scheme using threshold levels for coverage reflecting international targets, as reported by the *Countdown to 2015.* 



#### AFGHANISTAN

	Coverage Thresholds												
Category Definitions	Skilled attendant at delivery	Exclusive breastfeeding	Measles immunization	Oral rehydration therapy	Care-seeking for pneumonia								
Strong performance	≤70%	≥ 50%	≥ 90%	≥ 50%	≥ 70%								
Making progress	31-69%	21-49%	51-89%	31-49%	31-69%								
Falling behind	≤ 30%	≤ 20%	≤ 50%	≤ 30%	≤ 30%								

**Strong performance** – Coverage meets established targets or is high compared to that of other priority countries.

**Making progress** – Coverage falls within the middle range compared to other countries (but in most cases falls far short of either the stated target or the broader goal of full coverage).

**Falling behind** – Coverage falls far short of the target and is very low compared to the rest of the 60 priority countries.

### Endnotes

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Page 11 – Michael Bisceglie Indonesia. A 4-month-old boy, Abrar, sleeps in a temporary shelter for families displaced by the tsunami. Page 12 – Michael Bisceglie Bangladesh. A father with his 9-month-old baby. He and his wife attend parenting classes supported by Save the Children.

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Page 22 – Michael Bisceglie Egypt. Ezz takes her 6-month-old baby Iman to a health clinic supported by Save the Children.

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Page 24– Michael Bisceglie Nepal. A community health volunteer counsels a new mother about the importance of immunizations, family planning and breastfeeding.

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Page 29 – Robert Maass Indonesia. A pregnant woman and her child visit a midwife trained by Save the Children.

Page 32 – Adam Bernstein Egypt. Nagat had a healthy pregnancy and gave birth to a healthy baby girl with help from a Save the Children safe motherhood program.

Page 33 – Save the Children staff Vietnam. Ho Thi Duynh's newborn baby was saved from asphyxia by a health worker trained by Save the Children.

Page 35 – Save the Children staff Nicaragua. Community health worker Yamilda examines a baby in her home. The nearest health facility is difficult to reach and only open two or three mornings a week.

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Page 40 – Michael Bisceglie Burkina Faso. Mother Lamoussa and 6-monthold Nana wait their turn at a well built by Save the Children.

Page 42 – AI Grillo/Associated Press United States. A young boy walks past frozen human waste from honey buckets in Newtok, Alaska. The town's 315 residents have no indoor plumbing.

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Back Cover – Michael Bisceglie Nepal. Mother Sita holds her 5-month-old daughter Chandrapati while she listens to a talk about nutrition.



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