

# The building block framework: health systems and policies to save the lives of women, newborns and children



Coverage of effective interventions is to a large extent the result of the quality and effectiveness by which health services reach people and people's to access them. A well functioning health system comprises several building blocks that have multiple relationships and interactions, with people at the centre. To understand the context in which countries are making efforts to scale up maternal, newborn and child health interventions, the *Countdown* examined progress of key indicators related to each of the building blocks, complementing the information on intervention coverage (a direct function of service delivery).

## Health systems are more than building blocks

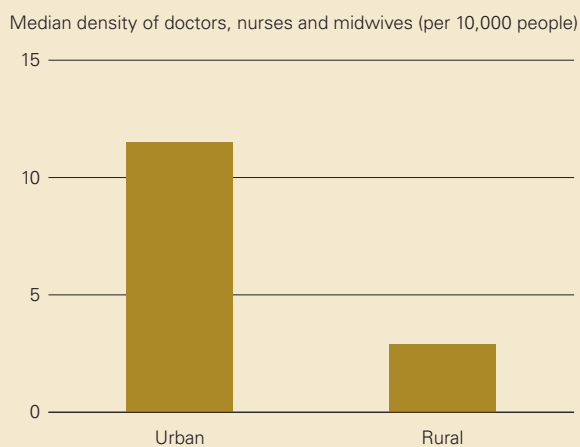


Source: Alliance for Health Policy and System Research 2010.

### Human resources

#### The challenge: shortages and maldistribution

Only 15 *Countdown* countries (22%) meet the critical threshold of 23 doctors, nurses and midwives per 10,000 people generally considered necessary to deliver essential health services.<sup>14</sup> The shortage is compounded



Note: Median refers to 26 *Countdown* countries with data available.  
Source: WHO 2009.

by uneven geographic distribution within countries.<sup>15</sup>

Increased investment in education of health workers, strategies for motivating health workers to remain in underserved areas and effective regulatory frameworks (including those for skills substitution) are among the effective policy options for addressing critical workforce shortages and maldistribution.

#### One potential solution: task-sharing to supplement services

Ethiopia, Ghana and Pakistan are among the countries addressing workforce shortages and maldistribution challenges through comprehensive strategies, including deployment of health service providers at the community level.<sup>16</sup> The United Republic of Tanzania and Zambia have authorized nonphysician clinicians to carry out certain specialized tasks.<sup>17</sup> More than 90% of caesarean sections in rural areas in Malawi and Mozambique are performed by surgical technicians, with low morbidity and mortality.<sup>18</sup>

## Health financing

### The challenge: excessive out-of-pocket payments

Median per capita health expenditure in the *Countdown* countries is \$80 (in 2007 international dollars), and only five countries devote at least 15% of their national budgets to health.<sup>19</sup> Only five countries have out-of-pocket expenditure as a percentage of total health expenditure of less than 15%; above this value households may be more vulnerable to catastrophic payments.<sup>20</sup>

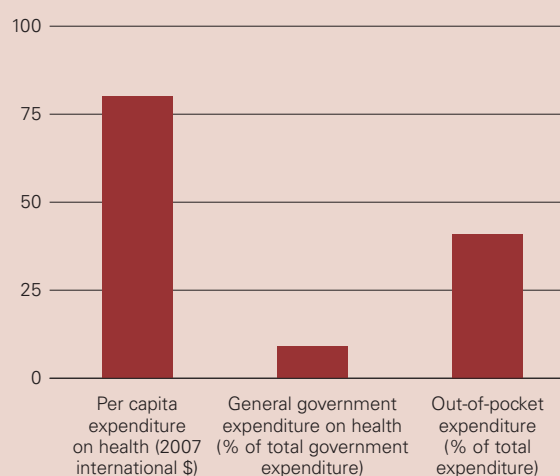
Maternal, newborn and child health services should be available, of good quality and free at the point of delivery in order to remove financial barriers to access and utilization.<sup>21</sup>

### Some solutions to move to universal access

A key step towards universal coverage is to move away from out-of-pocket payments through prepayment and risk-pooling schemes.<sup>22</sup> Several countries—Mexico, with *Seguro Popular*,<sup>23</sup> and China,<sup>24</sup> with the New Rural Cooperative Medical

Scheme—are moving in this direction. In Mali and Rwanda social health insurance schemes are achieving high coverage<sup>25</sup> and showing a positive effect on access to priority health services, including maternal, newborn and child health.<sup>26</sup> Uganda increased coverage of essential health services, particularly among the poor, by removing user fees.<sup>27</sup>

Financing indicators, median of 68 *Countdown* countries



Source: WHO 2010.

## Medicines and equipment

### The challenge: continuous supply of commodities

Access to medical products, technologies and essential drugs remains erratic in many countries, contributing to low coverage of family planning and poor availability of emergency obstetric care services.

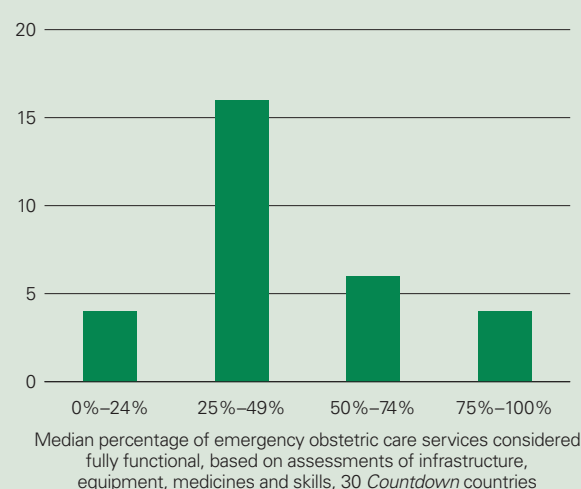
Updated policies on care for maternal, newborn and child conditions need to be accompanied by investment in infrastructure, medicines and supplies, in order to reach universal coverage and make an impact on women's and children's lives.

### Possible solutions

Local production of zinc blister packs in Bangladesh combined with health education and promotion through private sector has rapidly

increased coverage of zinc use rate in children with diarrhoea to 20%.<sup>28</sup> Globally, UNICEF increased procurement of zinc from 20.5 million tablets in 2006 to 158 million tablets in 2008.

Number of countries



Source: WHO, UNFPA, UNICEF, and AMDD 2009.

## Health information

### The challenge: timely, high-quality information

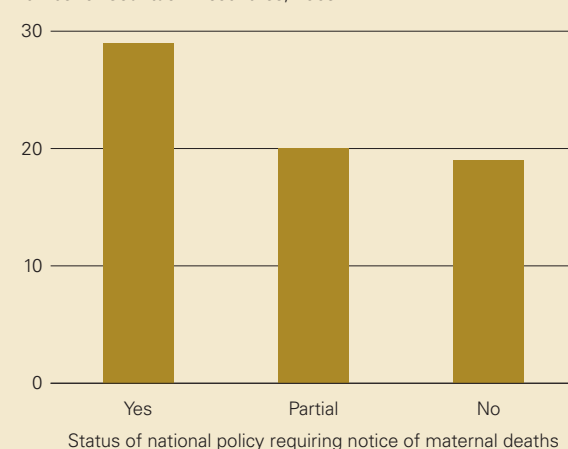
Decision-makers in most *Countdown* countries do not have the information they need to inform decisions and guide action.<sup>29</sup> Vital statistics, including birth registration and maternal death notification, and programme funding are examples of mechanisms that can address barriers to the quality of and access to health services.<sup>30</sup>

### One potential solution: maternal death audit and remedial action

The comprehensive monitoring and evaluation approach adopted in Tamil Nadu, India, which includes stronger information generation and use for decision-making accompanied by maternal death audits and surveillance, has improved maternal and child indicators.<sup>31</sup>

South Africa has also made progress in institutionalizing maternal death audits, which can reduce maternal and perinatal mortality.<sup>32</sup>

Number of *Countdown* countries, 2009



Source: WHO 2009.

## Governance and leadership

### The challenge: universal adoption of policies that support maternal, newborn and child health

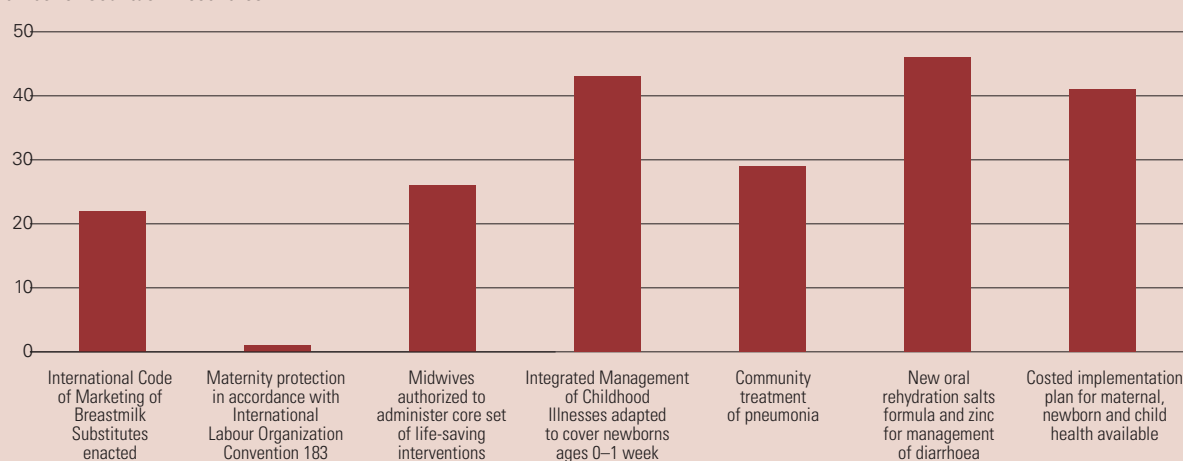
Too few countries have adopted evidence-based policies to increase access to and quality of essential maternal, newborn and child health services as recommended by WHO–UNICEF joint statements.<sup>33</sup> Just over one-third of *Countdown* countries allow midwives to perform lifesaving interventions, while 46 countries have updated guidelines on management of diarrhoea. Nevertheless, 29 countries have adopted national policies allowing community health

workers to manage pneumonia, compared with 18 in the 2008 *Countdown*. The presence of a national, costed MNCH implementation plan, necessary to estimate and allocate resources efficiently was reported by 41 countries.

### Possible solutions

Bangladesh and Nepal have shown that policies that increase access to treatment of diarrhoea and pneumonia in the community are effective in increasing coverage of child health interventions.<sup>34</sup> Allowing midwives to perform lifesaving interventions increases access to basic emergency obstetric care services and can reduce maternal mortality.<sup>35</sup>

Number of *Countdown* countries



Source: WHO 2009.

# Equal care for every mother and child



National data on coverage levels often hide important disparities among population subgroups. The *Countdown* equity analyses include systematic breakdowns of key coverage indicators by wealth quintiles, maternal education, sex of the child, urban/rural residence and region of the country.<sup>36</sup>

One way to summarize equity analyses is through a mean coverage index. Each country profile includes a figure showing the mean coverage index consisting of an unweighted average of four intervention areas across the continuum of care. Each area includes selected indicators for eight reproductive, maternal, newborn and child interventions: family planning (need for family planning satisfied), maternal and newborn health (at least one antenatal visit and skilled attendant at delivery), immunizations (measles, BCG and DPT3) and curative child care (diarrhoea and pneumonia management: oral rehydration and continued feeding and care seeking for pneumonia).

Figure 18 uses Benin as an example. The mean coverage index of the eight interventions is 73% among children in the richest wealth quintile compared with 41% in the poorest wealth quintile. The top part of figure 18 shows the coverage gap—or how much of an increase is needed to achieve universal coverage with all eight interventions. The gap equals 100% minus the mean coverage index and is much greater for the poor than for the rich.

In all 38 *Countdown* countries with Demographic and Health Survey data, intervention coverage is substantially higher among mothers and children from better-off households than among those from poor households (figure 17). Countries with similar levels of overall coverage may differ substantially in terms of equity. For example, both Guatemala and Zambia have an overall coverage index of 59%, but in Guatemala mothers and children from households in the poorest quintile show 38% coverage while in Zambia they show 55% coverage. Countries with smaller gaps between rich and poor—such as Bangladesh, Brazil, Egypt, Swaziland and Zambia—should be better studied to understand how they managed to reduce inequalities.

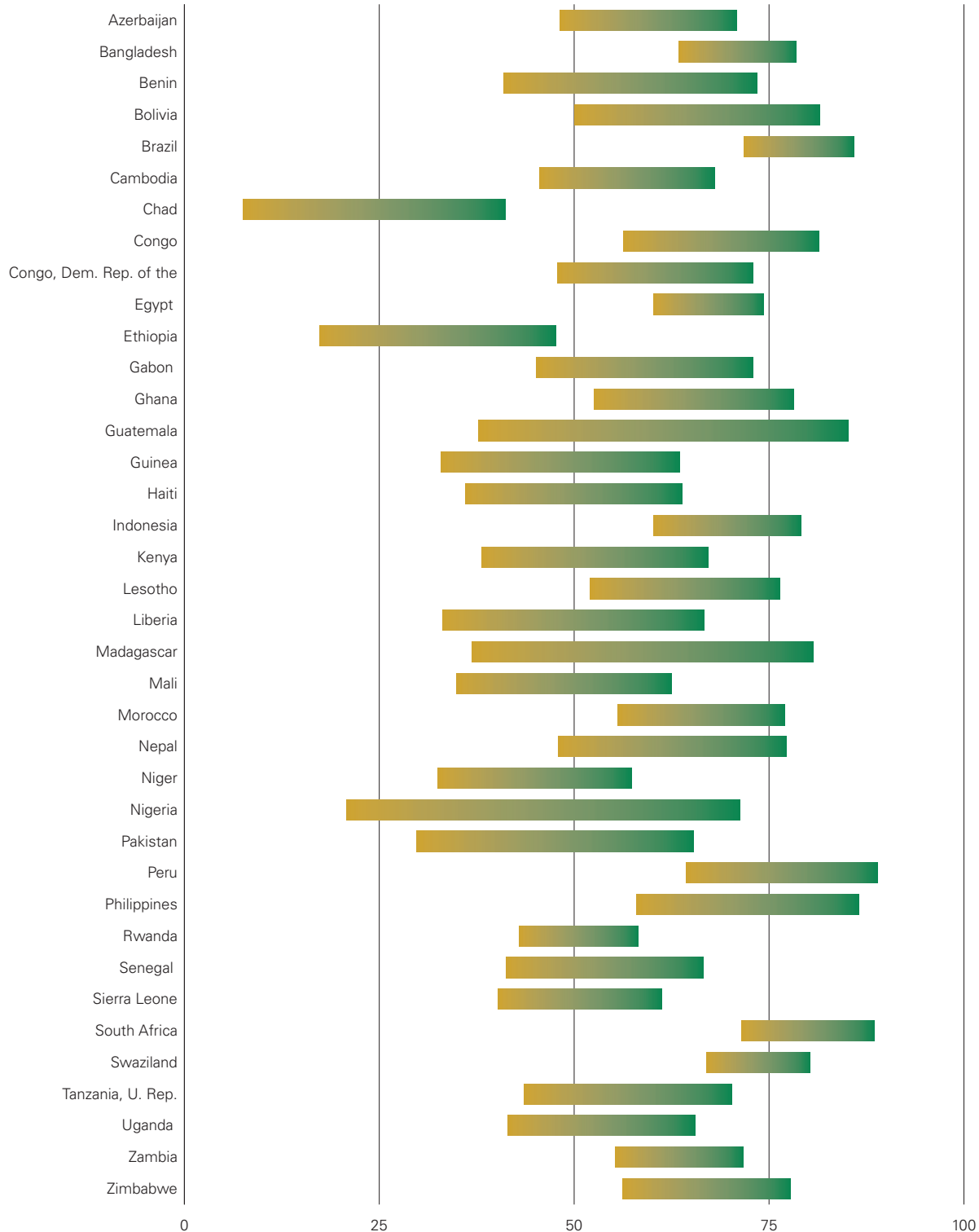
The equity analysis gaps are markedly larger for maternal and newborn interventions than interventions delivered to older children (figure 19). Interventions that are most frequently delivered in fixed health facilities (for example, antenatal, delivery or postnatal care) tend to show greater disparities than those delivered at the community level (for example, vaccinations, vitamin A supplementation or insecticide-treated nets). Family planning interventions, which may be delivered in fixed facilities or at the community level, fall between these two groups in terms of inequalities. Early initiation of breastfeeding shows remarkably small disparities—possibly because it is largely dependent on longstanding cultural practices not yet affected by promotion efforts.

FIGURE 17

The gap in intervention coverage between rich and poor households varies by country

Mean coverage index, poorest and richest wealth quintiles, selected Countdown countries, various years (%)

Poorest  Richest

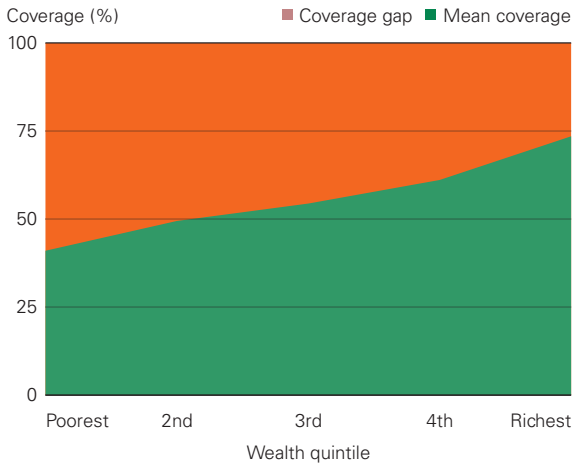


Note: Mean coverage index is based on coverage rates of eight maternal, newborn and child health interventions: met need for family planning, at least one antenatal care visit, skilled attendant at birth, measles vaccination, DPT3 vaccination, BCG vaccination, oral rehydration and continued feeding, and careseeking for pneumonia.

Source: Demographic and Health Surveys.

FIGURE 18

**The coverage gap in Benin for eight maternal, newborn and child health interventions decreases as wealth increases**

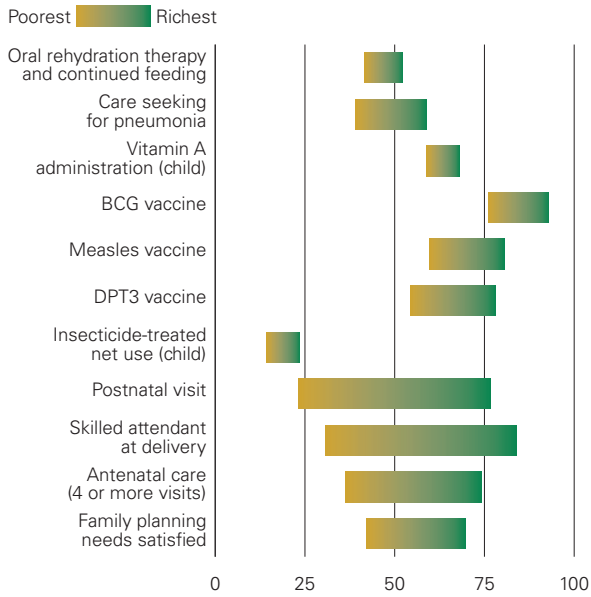


Source: Demographic and Health Surveys.

FIGURE 19

**The degree of inequality is markedly larger for maternal and newborn interventions than for those delivered to older children**

Average coverage levels of selected reproductive, maternal, newborn and child interventions, poorest and richest wealth quintile, 38 Countdown countries with data



Note: Postnatal care refers to postnatal care for all newborn infants.

Source: Demographic and Health Surveys.



# Country spotlight: Brazil's success in narrowing the gap



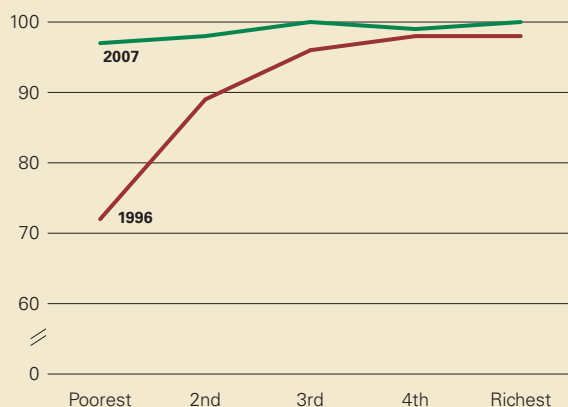
Brazil is one *Countdown* country on target to reach the MDGs related to child health and nutrition. Under-five mortality has been falling an average of 5.2% a year since 1990, considerably faster than the 4.4% needed to reach the MDG target. Currently, 22 of every 1,000 children now die before their fifth birthday.<sup>37</sup> Underweight prevalence among children under age 5 dropped from 5.7% in 1990 to 2.2% in 2006–2007,<sup>38</sup> while stunting fell from 19.9% to 7.1%.

Overall progress has been accompanied by a sharp decline in inequalities (see figures). In 1996 just over 70% of all births to mothers in the poorest socioeconomic quintile received skilled care during childbirth, but by 2007 coverage was universal. Likewise, stunting prevalence among children in the poorest quintile fell from 40% in 1989 to 10% in 2007, while remaining stable at 3%–5% in the richest quintile. These are only two examples among many for which equity improved in the last two decades.

Brazil's success in reducing inequities cannot be attributed to a single factor. Although economic growth has been moderate since 1990, income distribution showed marked improvements in recent years. A nationwide, tax-based unified health system without any user fees was launched in 1988, and geographic targeting has guided the deployment of family health teams of doctors, nurses and community health workers in the poorest areas of the country. As a result, primary health care coverage is now virtually universal, as seen with skilled delivery. In addition, Brazil's conditional cash transfer programmes cover about one third of the population, and multiple integrated health sector initiatives—including immunization, HIV control and breastfeeding promotion activities—have been highly successful.

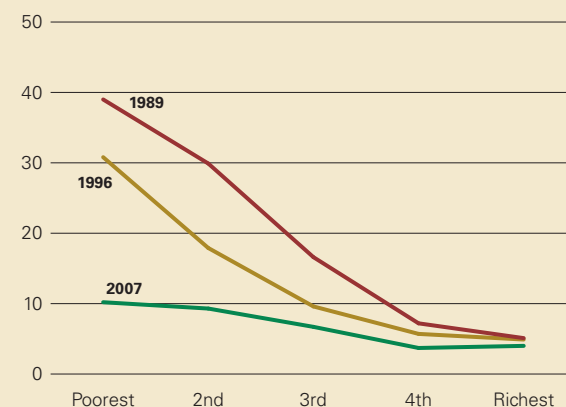
Perhaps more than any single policy or initiative, the reduction of regional and socioeconomic disparities in health and development has been a central element in Brazil's political agenda for the last 20 years, and it is now starting to bear fruit.

Coverage of skilled attendant at birth, by income quintile, Brazil, 1996 and 2007 (%)



Source: Barros and others 2010.

Prevalence of stunting among children under age 5, by income quintile, Brazil, 1989, 1996 and 2007 (%)



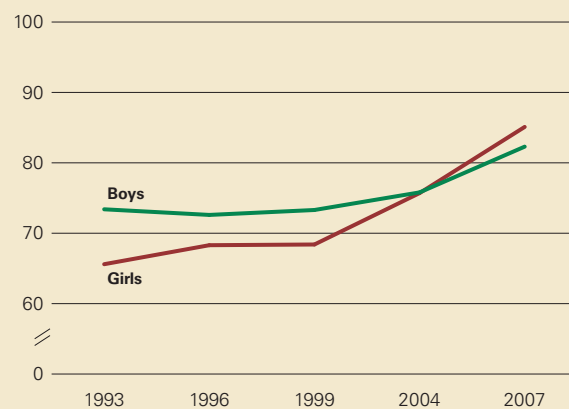
Source: Monteiro and others 2010.

# Country spotlight: Narrowing gender differentials in Bangladesh



Historically, Bangladeshi boys have been more likely to receive lifesaving interventions than girls have (see figure), a pattern common in South Asian countries. But in the past decade Bangladesh has seen gender disparities effectively disappear in coverage of measles vaccination. As with Brazil, the observed success cannot be attributed to a single initiative, but a series of initiatives aimed at women's empowerment (micro-credit, women's groups, female education and the like) coupled with greater access to health care, particularly through selective outreach by community workers, may account for these changes. An in-depth analysis in the Matlab area shows that community health workers contributed to reducing gender inequities in immunization coverage.<sup>39</sup> Nevertheless, socioeconomic disparities in Bangladesh remain large.

Coverage of measles vaccination, by gender, Bangladesh, 1993–2007 (%)



Source: Demographic and Health Surveys.



## Errata: Countdown 2010 Decade Report

### Page ii

Under the subheading, "Additional writing team," Nancy Terreri's affiliation should read "(FCI/PMNCH)."

Under the heading, "Acknowledgements," the first line should read "UNICEF/Statistics and Monitoring Section for use of global databases, preparation of country profiles and review of report text."

### Page 24

In figure 12, note that for each country the left bar shows the most recent year with data on coverage values and the right bar shows data for a previous year.

### Page 25

The last sentence in the third paragraph should read, "Median coverage of care-seeking was only 48% for the 64 *Countdown* countries with data available, while the median coverage of children with suspected signs of pneumonia who actually received an antibiotic was 27% in 35 countries with data."

### Page 32

In figure 17, the subtitle should read "Mean coverage index, poorest and richest wealth quintiles, selected *Countdown* countries, various years (%)," and the note should read "Mean coverage index is based on coverage rates of eight maternal, newborn and child health interventions: met need for family planning, at least one antenatal care visit, skilled attendant at birth, measles vaccination, DP T3 vaccination, BCG vaccination, oral rehydration and continued feeding, and care-seeking for pneumonia."

After the printed report was produced, an error was detected in the formula used to calculate the average coverage by wealth quintile. For most countries and wealth quintiles, the errors were very small. Errors greater than five percentage points in one or more wealth quintiles were noted in the following countries: Azerbaijan, Democratic Republic of Congo, Egypt, India, Mali, Nepal, Pakistan and Rwanda. The country profiles available on the *Countdown* website have been corrected (<http://www.countdown2015mnch.org>).

### Page 33

In figure 19, the subtitle should read "Average coverage levels of selected reproductive, maternal, newborn and child interventions, poorest and richest wealth quintile, 38 *Countdown* countries with data."

**Page 37**

In figure 21, the subtitle should read “Official Development Assistance to child health and to maternal and newborn health, all countries, 2007 (2005 \$billions)

In figure 22, the subtitle should read “Official Development Assistance, all countries 2003-2007 (2005 \$ billions)

Data specific to *Countdown* countries will be presented in the 2011 *Countdown* report.