Indonesia is on track to achieve MDG 4, however disparities between rural and urban areas, and within provinces need attention to ensure equitable child health services. The annual rate of reduction in the under-5 mortality rate was 4.5 between 1990 and 2011. A focus on neonatal mortality reduction would accelerate the progress further, as this constitutes almost half of all under-5 mortality. The country has made considerable strides to improve maternal survival. Refining the quality of antenatal care, turning attention to the high prevalence of preterm births and increasing coverage of postnatal care would further reduce preventable maternal and newborn mortality.

**TRENDS AND POLICIES**

![Trends in child mortality](chart)

**Trends in maternal mortality**

![Trends in maternal indicators](chart)

**National health policies and services**

<table>
<thead>
<tr>
<th>Policy</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita total expenditure on health (US$), 2007–2011¹</td>
<td>77</td>
</tr>
<tr>
<td>Out-of-pocket expenditure (% of private expenditure on health), 2007–2011¹</td>
<td>75.1</td>
</tr>
<tr>
<td>Specific notification of maternal deaths</td>
<td>Yes</td>
</tr>
<tr>
<td>Midwife personnel authorized to administer core set of lifesaving interventions</td>
<td>Partial</td>
</tr>
<tr>
<td>Costed national implementing plans for maternal, newborn and child health available</td>
<td>No</td>
</tr>
<tr>
<td>Number of basic emergency obstetric and newborn care facilities²</td>
<td>1,667</td>
</tr>
<tr>
<td>Facilities per 1,000 births³</td>
<td>1</td>
</tr>
<tr>
<td>Community treatment of pneumonia with antibiotics</td>
<td>No</td>
</tr>
<tr>
<td>Oral rehydration solution and zinc for management of diarrhoea</td>
<td>Yes</td>
</tr>
</tbody>
</table>


**Sources for figures:** Trends in child mortality: 1990 and 2010 child data from UN Inter-agency Group for Child Mortality Estimation, Levels & Trends in Child Mortality, 2011; Report on Achievement of the Millennium Development Goals Indonesia 2010 (IMR); Indonesia Demographic and Health Survey (DHS) 2007; Trends in maternal mortality: 2013 targets from Countdown to 2015 Indonesia Country Profile (retrieved from www.countdown2015mrcn.org/country-profiles) and Report on Achievement of the Millennium Development Goals Indonesia 2010; Indonesia 2007 DHS, Indonesia Ministry of Health, Indonesia, A Basic Health Research, 2007; Trends in maternal indicators: Indonesia Demographic Health Survey (DHS) 2003 and 2007. Notes: Contraceptive prevalence rate proportion of currently married women aged 15–49 who were using some method of family planning at the time of the survey; unmet family planning need: % of women with an unmet need for family planning (spacing or limiting); adolescent birth rate: annual number of births among women aged 15–19 per 1,000 women in the age group.
### Indicators of quality of care

<table>
<thead>
<tr>
<th></th>
<th>Antenatal care</th>
<th>Intrapartum/delivery</th>
<th>Postnatal care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANC1+</strong></td>
<td>95.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ANC4+</strong></td>
<td>81.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BP measured</strong></td>
<td>91%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blood sample</strong></td>
<td>29%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Urine sample</strong></td>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SBA</strong></td>
<td>79%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inst. delivery</strong></td>
<td>46%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C-section</strong></td>
<td>6.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BF (excl.)</strong></td>
<td>32%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PNC within 2 days</strong></td>
<td>70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Birth reg.</strong></td>
<td>53%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Indonesia DHS 2007.

**Notes:** ANC1+: % of women who received ≥1 ANC visit; ANC4+: ≥4 ANC visits; *% of ANC visit that included measuring blood pressure (BP) and collecting blood and urine samples; SBA: % of births delivered by a skilled birth attendant (doctor, nurse, midwife); Inst. delivery: % of births delivered at a health facility; C-section: % of births delivered by caesarean section; BF (excl.): % of children younger than 6 months who were exclusively breastfed; PNC within 2 days: % of women who received a postnatal check-up within 2 days of delivery calculated by adding the sum of the % of women who received PNC within less than 4 hours, 4–23 hours and within 2 days of delivery and mentioned in the DHS; birth reg.: % of children younger than 5 years whose birth was registered with the State.

### Availability of National Policies for High-Impact Interventions Shown to Improve Neonatal Survival Throughout the Continuum of Care

**Preconception**
- Folic acid supplementation

**Antenatal**
- Tetanus toxoid immunization
- Syphilis screening
- Pre-eclampsia and eclampsia prevention
- Presumptive malaria treatment
- Detection and treatment of asymptomatic bacteriuria

**Intrapartum**
- Skilled maternal and neonatal care
- Emergency obstetric care
- Antibiotics for PROM
- Steroids for pre-term labour
- C-section
- PMTCT
- Labour surveillance
- Clean delivery practices

**Postnatal**
- Resuscitation of newborn baby
- Breastfeeding
- Prevention and management of hypothermia
- Kangaroo mother care
- Community-based pneumonia management
- Emergency neonatal care

**Legend:** green: policy in place; red: no policy or clear guideline in place.

**Sources:**
1. Policies are addressed/mentioned in the National Strategic Plan of Making Pregnancy Safer Indonesia 2001–2010, except as indicated;
2. Darmstadt et al., 2005;
4. Indonesia Ministry of Health, Integrated Antenatal Care Guideline (Pedoman Pelayanan Antenatal Terpadu); Edisi kedua, Dirjen Bina Gizi and KIA. Jakarta, 2012;

**Notes:** PROM: Premature rupture of membranes; emergency obstetric care: management of complications-obstructed labour, haemorrhage, hypertension, infection, C-section: caesarean section (detection and management of breech); PMTCT: prevention of mother-to-child transmission of human immunodeficiency virus (HIV); labour surveillance (including partograph) for early diagnosis of complications; kangaroo mother care (care for low birth weight infants in health facilities); emergency neonatal care: management of serious illness (infections, asphyxia, prematurity, jaundice).

**Reference:**
Readiness for National Scaling Up of Newborn Care

**Agenda setting**
- National needs assessment for newborn care conducted
- Local evidence generated for newborn survival
- Existence of a convening mechanism for newborn health issues
- Focal person for newborn health in Ministry of Health
- Key maternal and newborn indicators included in national surveys (e.g. neonatal mortality rate)

**Policy formulation**
- National newborn policy endorsed
- Newborn policy integrated into other health policies or strategies
- Essential drug list includes injectable antibiotics for primary level care
- Midwives authorized to perform neonatal resuscitation
- National targets to track newborn health established
- Key maternal and newborn indicators included in national health information systems
- Community-based cadres authorized to perform neonatal resuscitation (midwives)
- Primary-level cadres authorized to administer injectable antibiotics for newborn infections (midwives)
- Community-based cadres authorized to administer injectable antibiotics for newborn infections (midwives)

**Policy implementation**
- Supervision system for maternal, newborn and child health established at primary health centre level
- Protocol or standard for district hospital care of sick newborns in place
- Integrated management of childhood illness algorithm adapted to include the first week of life
- Resource requirement for primary health care available for newborns
- Resource requirement for secondary-level health care available for newborns (not all)
- System for neonatal death audits exists
- System for perinatal death audits exists
- Cadre identified for home-based newborn care
- In-service newborn care training materials for community-based cadres (village midwife)
- In-service newborn care training materials for facility-based cadres (village midwife)
- Pre-service newborn care education for community-based cadres (village midwife)
- Pre-service newborn care education for facility-based cadres (village midwife)

Legend: **green**: benchmark met; **red**: benchmark not met.

Sources: Moran, A.C. et al., 2012. Availability of benchmarks as per UNICEF Indonesia Country Office.
CONTINUING INEQUITIES: Indicators by residence, wealth quintiles and provinces

**Disparities by residence**

<table>
<thead>
<tr>
<th></th>
<th>U5MR</th>
<th>IMR</th>
<th>NMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>24</td>
<td>45</td>
<td>60</td>
</tr>
<tr>
<td>Urban</td>
<td>18</td>
<td>31</td>
<td>38</td>
</tr>
<tr>
<td>Country total</td>
<td>17</td>
<td>27</td>
<td>35</td>
</tr>
</tbody>
</table>

**Disparities by wealth quintiles**

<table>
<thead>
<tr>
<th></th>
<th>U5MR</th>
<th>IMR</th>
<th>NMR total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest</td>
<td>27</td>
<td>56</td>
<td>77</td>
</tr>
<tr>
<td>Wealthiest</td>
<td>17</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>Country total</td>
<td>17</td>
<td>27</td>
<td>35</td>
</tr>
</tbody>
</table>

**Most and least affected provinces**

<table>
<thead>
<tr>
<th></th>
<th>U5MR</th>
<th>IMR</th>
<th>NMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS</td>
<td>96</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>DIY</td>
<td>74</td>
<td>19</td>
<td>13</td>
</tr>
</tbody>
</table>

**Sources:** Indonesia DHS 2007.

Notes: Comparison of data is by residence (rural versus urban versus country total), wealth quintiles (poorest versus richest versus country total) and by provinces (most affected versus least affected); urine sample (obtained during ANC visit); SBA: % of pregnancies delivered by skilled birth attendant; birth reg.: % of children younger than 5 years whose birth was registered with the State. Provinces: WS: West Sulawesi, DIY: DI Yogyakarta, CK: Central Kalimantan, DKI: DKI Jakarta.
## EQUITY FOCUS: Indicators by residence, wealth quintiles and provinces

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Residence</th>
<th>Quintiles</th>
<th>Most and least affected provinces</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
<td>Poorest</td>
</tr>
<tr>
<td>U5MR (country avg: 35%)</td>
<td>60</td>
<td>38</td>
<td>77</td>
</tr>
<tr>
<td>NMR (country avg: 17%)</td>
<td>24</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>IMR (country avg: 27%)</td>
<td>45</td>
<td>31</td>
<td>56</td>
</tr>
</tbody>
</table>

### Antenatal

- Informed pregnancy complications at ANC, % (country level: 38.8%)
  - 35.4 43.3 25.7 50.5 M: Maluku (16.1); L: West Java (50.8)
- Blood pressure taken (country avg: 90.7%)
  - 88.5 96.4 81.5 98.0 M: Maluku (69.1); L: DKI Jakarta (98.9)
- Blood sample taken (country avg: 29.2%)
  - 25.7 33.9 22.6 37.2 M: Maluku (17.6); L: DKI Jakarta (58)
- Urine sample taken at ANC, % (country level: 40.1%)
  - 33.2 49.2 22.6 56.6 M: Maluku (12.8); L: DKI Jakarta (69.6)

### Intrapartum

- Skilled birth attendant at delivery (country level: 73%)
  - 62.7 87.6 43.8 95.4 M: Maluku (32.8); L: DKI Jakarta (97.3)
- Percentage delivered by C-section (country level 6.8%)
  - 3.9 11 1.8 16.8 M: Central Kalimantan (1.4); L: DKI Jakarta (13.8)

### Postpartum

- No postnatal check-up (country total: 16.4)
  - 17 14.5 22.7 10.7 M: Papua (66); L: DI Yogyakarta (Java; 2.0)
- PNC within 2 days (country avg: 70.3%)
  - 70.6 69.1 66.6 67.8 M: Papua 26.9; L: DI Yogyakarta (Java; 93.5)
- Birth registration (country avg: 53.4%)
  - 41.4 70.5 22.9 83.8 M: Maluku 18.7; L: DI Yogyakarta (Java; 93.8)
- Exclusive breastfeeding (country %: 32)
  - - - -

### Children younger than 5 years

- % who received ORS or RHF (country level %: 46.1)
  - 47.4 43.9 47 38.7 M: North Sumatra (31.8); L: DI Yogyakarta (Java; 78.9)
- % continued feeding and given ORT and/or increased fluids (country avg: 54.3%)
  - 55.8 51.7 54.5 48.4 M: Banten (33); L: DI Yogyakarta (Java; 89.7)
- % of under-5 children with symptoms of ARI and/or fever whom advice or treatment was sought from a health facility or provider (country avg: 65.9%)
  - 63 70.5 50.6 73.6 M: Maluku 42.6; L: Bali (83.2)
- DPT3 (country avg: 84.8%)
  - 82.8 87.4 71.9 89.2 M: West Papua (56.9); L: Central Java (100)

Sources: All data from DHS 2007 except for U5MR, IMR and NMR totals, which are from UN Inter-agency Group for Child Mortality Estimation, Levels & Trends in Child Mortality, 2011.
Backstopping midwives with life-saving technology

In an innovative arrangement to help midwives improve their service to women and children at the village level, Nokia, PT XL Axiata (telecommunications service) and UNICEF teamed up in 2012 to provide 200 midwives in West Lombok with a phone and application service called Nokia Life Info Bidan, which sends useful SMS information on maternal and child health. West Lombok is located in West Nusa Tenggara, a province with one of the highest maternal and child health death rates in the country. UNICEF and Nokia provide the cellular phones while PT XL Axiata provides 25,000 rupiah worth of airtime every month.

Nokia Life Info Bidan, which sends useful SMS information on maternal and child health, highlights healthy practices in pregnancy, safe motherhood, nutrition and immunization to early child development and learning; the midwives discuss the messages in mothers’ classes, during appointments in the posyandu (health clinics) or wherever they meet with the community.

"I will note the messages down and put them in a book so that I can discuss them with cadres and community members although I can only get a cellular signal from one room in my house," explained Luluk, who lives in Mareje Timur, a village in the hills some two hours from the district capital.

The project’s baseline survey revealed that all midwives used a mobile phone and most (85 per cent) were interested in SMS health information, as were 53 per cent of their patients. An assessment of midwives’ knowledge suggested the SMS messages should focus on areas of lowest scores – postpartum care, pneumonia and malaria. The initial monitoring reports confirmed a high use rate (97 per cent) of messages that reached patients through the midwives.

"I will note the messages down and put them in a book so that I can discuss them with cadres and community members although I can only get a cellular signal from one room in my house”

Background

Employing village midwives in Indonesia has been a successful strategy to reduce the urban–rural gap in skilled attendance at delivery. The Government’s village midwife programme (bidan di desa programme) provided one-year midwifery training between 1989 and 1996. When a critical mass of midwives was reached in 1996, the training was replaced with a three-year diploma course for high school graduates, which remains in place. Once trained, the midwives are assigned to a village or community. This approach has had a positive impact on linking communities with the formal health sector and on increasing the coverage of care for mothers and newborns. Additionally, the partnership programme in which village midwives work with traditional birth attendants has had a positive impact on coverage of care.

Village midwives in Indonesia provide the whole spectrum of maternal and newborn care, from promotional to preventive, to curative care. They conduct deliveries and provide essential pregnancy and newborn care, including management and referral for complications. Midwife-assisted deliveries take place at the patient’s home or the village midwife’s home. Keeping their professional knowledge up to date is necessary to provide quality advice and counselling to clients and it is important for job satisfaction. Although formal training opportunities (workshops, seminars, and meetings) exist, the frequency and coverage are not optimal.