UNICEF-WHO

LOW BIRTHWEIGHT ESTIMATES

Levels and trends 2000–2015

unicef

World Health
Organization

The estimates presented in this brochure are not necessarily comparable with country reported values (see Annex 2).

Suggested citation: United Nations Children's Fund (UNICEF), World Health Organization (WHO). UNICEF-WHO Low birthweight estimates: Levels and trends 2000–2015. Geneva: World Health Organization; 2019 Licence: CC BY-NC-SA 3.0 IGO.

data.unicef.org/nutrition | who.int/nutrition

NOTE: These maps are stylized and not to scale and do not reflect a position by UNICEF or WHO on the legal status of any country or territory or the delimitation of any frontiers. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Sudan and South Sudan has not yet been determined. The final status of Abyei area has not yet been determined.

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Levels and trends 2000–2015

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Progress towards the **target of a 30 per cent reduction** in low birthweight prevalence between 2012 and 2025

2012 (Baseline)	**15.0%**
2015 (Latest)	**14.6%**
Global target 2025	**10.5%**
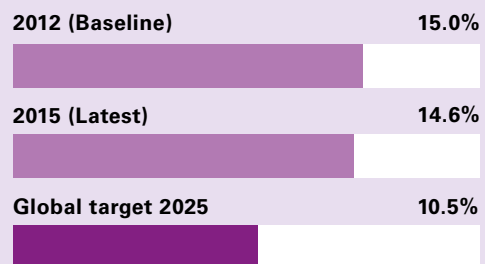
WHAT IS LOW BIRTHWEIGHT (LBW)?

A weight at birth of

less than 2,500g (<5.5 lbs)

regardless of gestational age

HOW DOES IT HAPPEN?

Increased risk of low birthweight

Premature birth (<37 weeks) **and/or** **Growth faltering in the womb**

Maternal malnutrition: anaemia, underweight, overweight, etc., before and during pregnancy.

Maternal health problems: high blood pressure, diabetes, infection, etc.

Maternal characteristics: low/high maternal age, multiple parity, poor birth spacing, etc.

Other risk factors: smoking, alcohol, medically unnecessary caesarean deliveries, etc.

WHY DOES IT MATTER?

Compared with babies born at or above the low birthweight cut-off (2,500 g), babies born with low birthweight have a higher risk of:

In childhood

STUNTING

LOWER IQ

DEATH

In adulthood

ADULT OVERWEIGHT AND OBESITY

Heart disease *Diabetes*

NONCOMMUNICABLE DISEASES

WHAT IS OUR GOAL?

A **30% reduction** in low birthweight prevalence between 2012 and 2025

A GOOD START IN LIFE BEGINS IN THE WOMB

To grow a healthy baby, mothers need good nutrition and rest, adequate antenatal care and a clean environment. These ingredients for a healthy pregnancy can help prevent, identify and treat the conditions that cause low birthweight and keep babies alive and thriving.
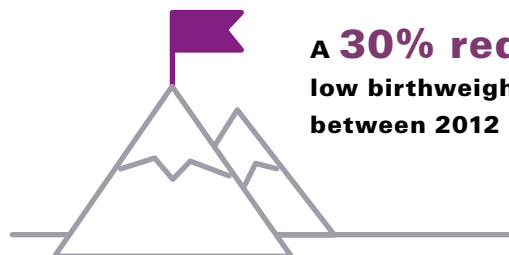
A newborn's weight at birth is an important marker of maternal and fetal health and nutrition. Low birthweight newborns have a higher risk of dying in the first 28 days of life. Those who survive are more likely to suffer from stunted growth[1] and lower IQ.[2] The consequences of low birthweight continue into adulthood, increasing the risk of adult-onset chronic conditions such as obesity and diabetes.[3]

Reducing low birthweight has long been recognized as a public health priority; and with the adoption of the Global Nutrition Targets in 2012, it is now a global commitment. During the 65th World Health Assembly (WHA), Member States endorsed the target of a 30 per cent reduction in low birthweight globally between 2012 and 2025. However, reporting on progress remains a challenge.

Despite ongoing efforts to strengthen national surveillance systems, the availability and quality of data on low birthweight vary widely among countries. To address this challenge, the UNICEF-WHO 2019 low birthweight estimates were derived using model approaches to improve comparability across countries and years, while filling data gaps *(Text Box 1 and Annex 2).*

Reaching the low birthweight target would save lives and fuel the achievement of other nutrition targets, such as those on reducing stunting, wasting and other forms of malnutrition. Yet today, the world is still far from achieving this objective.

The UNICEF-WHO low birthweight estimates indicate that one in seven livebirths – 20.5 million babies globally – suffered from low birthweight in 2015, almost half of them in Southern Asia. The new estimates reveal stagnated progress on reducing the prevalence of low birthweight between 2000 and 2015,

with deceleration of the annual rate of progress in the 2010–2015 period compared with the 2000–2009 period. This is the first time such estimates have been made available globally, making it possible to track progress and support various initiatives including the WHA Nutrition Targets, the Every Newborn Action Plan and the Global Strategy for Women's Children's and Adolescents' Health. If trends continue, the world will not achieve the 2025 WHA low birthweight target – and this lack of progress will impede the achievement of the 2030 Sustainable Development Goals.

To accelerate progress, we need more and better quality data. Most data on low birthweight come from the more developed countries – yet these countries account for just under 5 per cent of all low birthweight births in 2015. Among the more developed regions, an average of 14.2 data points per country were included in the dataset; in contrast, there were on average only three data points per country in Africa and only 0.4 per country in Oceania. Furthermore, 54 countries – more than half from Africa and Oceania – had no data meeting inclusion criteria.

Low birthweight has multiple causes[4] and reducing it requires strategies to improve maternal nutritional status; guarantee adequate maternal services and care before, during and after birth; and strengthen social support.

Improving the quality and frequency of birthweight reporting is also critical to reducing the prevalence of low birthweight worldwide. Birthweight data were not available for nearly one third, or 39.7 million newborns in 2015 globally, with Africa accounting for over half of these. Strengthening national surveillance systems improves data collection and reporting on low birthweight, giving governments the power to set targets, develop effective programmes and monitor progress.

With robust data and sound programming to reach all mothers – particularly the most vulnerable – we can help more babies enter the world with a healthy weight and a brighter future.

METHODS USED TO GENERATE ANNUAL COUNTRY LOW BIRTHWEIGHT ESTIMATES

The UNICEF-WHO 2019 low birthweight database presents annual estimates from 2000–2015 for 147 countries that had at least one data point meeting inclusion criteria. Country input data were obtained through systematic searches of National Statistical Office and Ministry of Health websites, from websites of the household survey programmes of Multiple Indicator Cluster Surveys and Demographic and Health Surveys and from data gathered during an extensive country consultation.

All country input data were reviewed for coverage and quality. Administrative data were categorized as (i) high coverage, if representing ≥90 per cent of live births; (ii) medium coverage, if representing between 80 and 90 per cent of live births, or; (iii) not included, if covering <80 per cent of live births. Household survey data meeting inclusion criteria were adjusted for missing birthweights and heaping as described in Annex 2.

A total of 1,447 data points met inclusion criteria and were used to generate annual country estimates with methods applied varying by availability and type of input data (see box on right). The annual country estimates were then used to generate the regional and global low birthweight estimates from 2000 to 2015.

For further details see Annex 2.

Three types of annual country low birthweight estimates:

b-spline: Data for countries with ≥8 higher coverage administrative data points with ≥1 prior to 2005 and ≥1 more recent than 2010 were smoothed with b-spline regression to generate annual low birthweight estimates that followed country-reported estimates very closely.

Hierarchical regression: Data for countries not meeting requirements for b-spline but with ≥1 data point meeting inclusion criteria were fitted into a model using covariates to generate annual low birthweight estimates. These estimates may vary substantially from those reported by countries.

No estimate: Countries with no available data or with data that did not meet inclusion criteria.

NEARLY 15 PER CENT OF BABIES WORLDWIDE ARE BORN WITH LOW BIRTHWEIGHT – MORE THAN HALF OF THEM IN ASIA

One in every seven newborns was born with low birthweight in 2015 *(Figure 1)*. These babies were more likely to die during their first month of life or face lifelong consequences such as stunted growth[1] and lower IQ.[2]

The prevalence of low birthweight varied widely across regions – from 7.2 per cent in More Developed Regions to 17.3 per cent in Asia. There were also variations across sub-regions. In Southern Asia, the prevalence of low birthweight was 26.4 per cent in 2015 – more than five times higher than the 5.1 per cent prevalence in Eastern Asia *(Figure 2)*. In fact, these two sub-regions of Asia had respectively the highest and lowest low birthweight prevalances of all sub-regions in the world. In other regions, there was greater homogeneity between sub-regions with the highest and lowest low birthweight prevalence. In Latin America and the Caribbean for example, there was a mere 1.3 percentage point difference, while in Africa, there was a 3 percentage point difference.

Of the 20.5 million low birthweight babies born in 2015, more than half were born in Asia. Indeed, Southern Asia accounted for nearly half of all low birthweight newborns in the world *(Figure 3)*. Africa was home to about one quarter of all low birthweight newborns, with the majority born in Eastern and Western Africa.

Progress on reducing low birthweight has been limited in all regions and sub-regions, for both prevalence and numbers of children affected *(Figures 2 and 3)*. In Latin America and the Caribbean and in More Developed Regions there was no change at all in the prevalence of low birthweight between 2000 and 2015. Indeed overall, no region or sub-region experienced statistically significant changes in prevalence or numbers affected during this 15-year period.

8.7%

0.9 million

LATIN AMERICA AND CARIBBEAN

7.2%
1.0 million
MORE DEVELOPED REGIONS***

14.6%
20.5 million
GLOBAL

13.7%
5.7 million
AFRICA

17.3%
12.8 million
ASIA*

9.9%
1.4 million
OCEANIA**

| <5% | 5–<10% | 10–<15% | 15–<20% | ≥20% | Partial data† | No estimate |
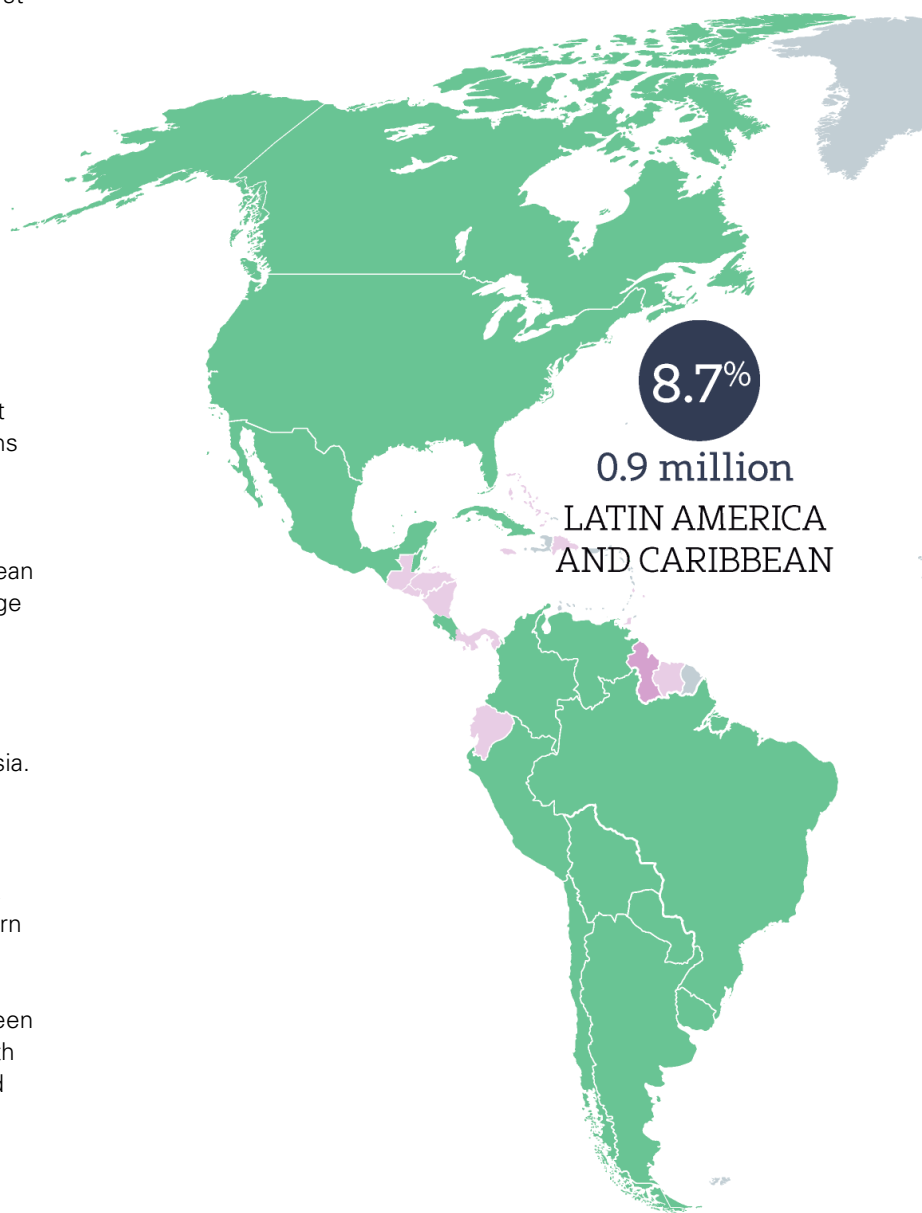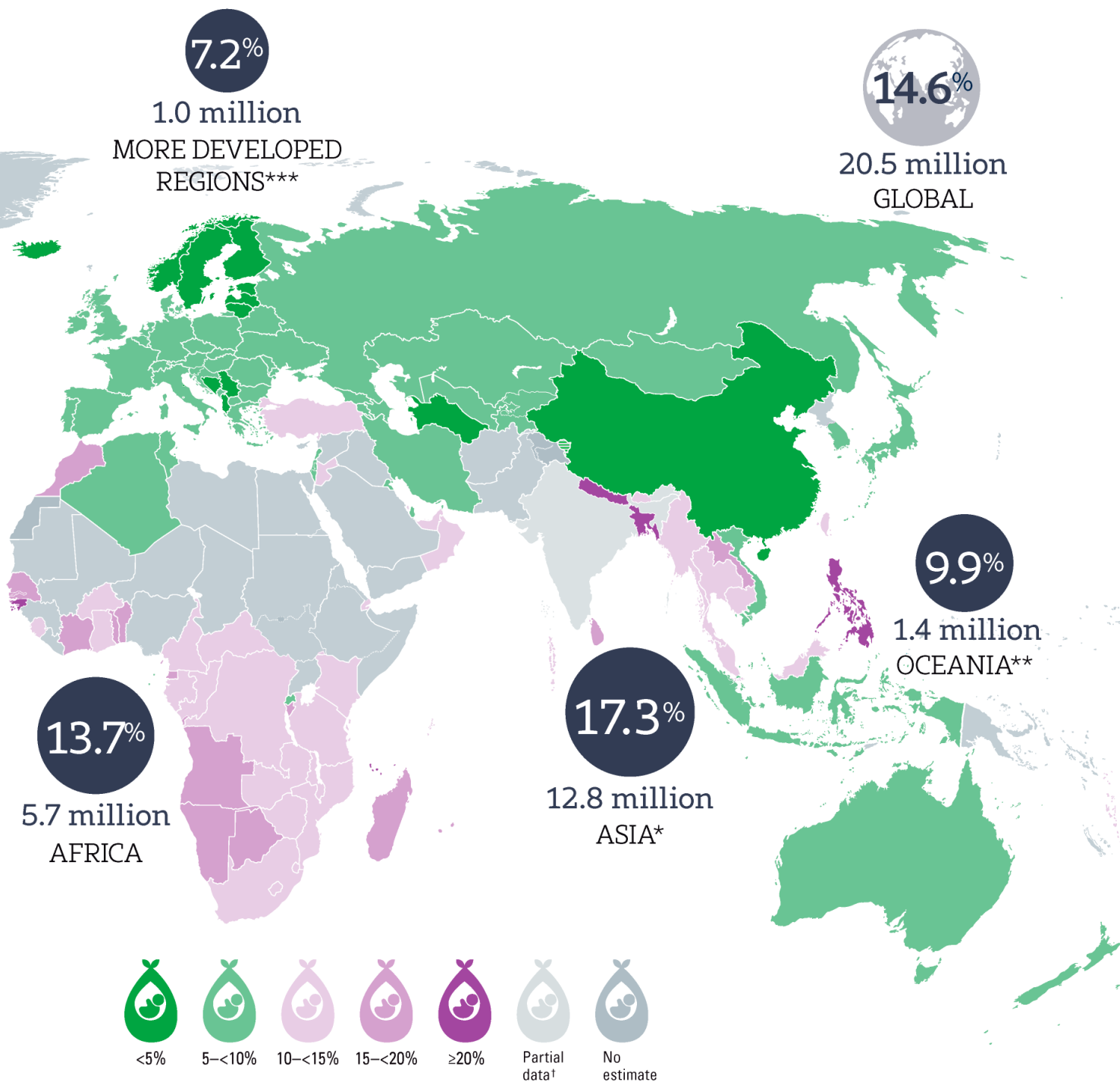
Figure 1: Low birthweight prevalence, by country and United Nations region, 2015.

Source: UNICEF-WHO Low birthweight estimates, 2019. Note: *Asia excludes Japan. **Oceania excludes Australia and New Zealand; ***More developed regions include Northern America, Europe, Japan and Australia and New Zealand. †The estimate is based on partial data for the most recent survey, therefore modeled estimates are not shown for the individual country. This figure was originally published in *The Lancet Global Health* on 15 May 2019 under the title "National, regional, and worldwide estimates of low birthweight in 2015, with trends from 2000: a systematic analysis" and is available online at <http://dx.doi.org/10.1016/S2214-109X(18)30565-5>.

LOW BIRTHWEIGHT PREVALENCE VARIES WIDELY BY SUB-REGION IN ASIA

REGIONAL AND GLOBAL (2000, 2015)
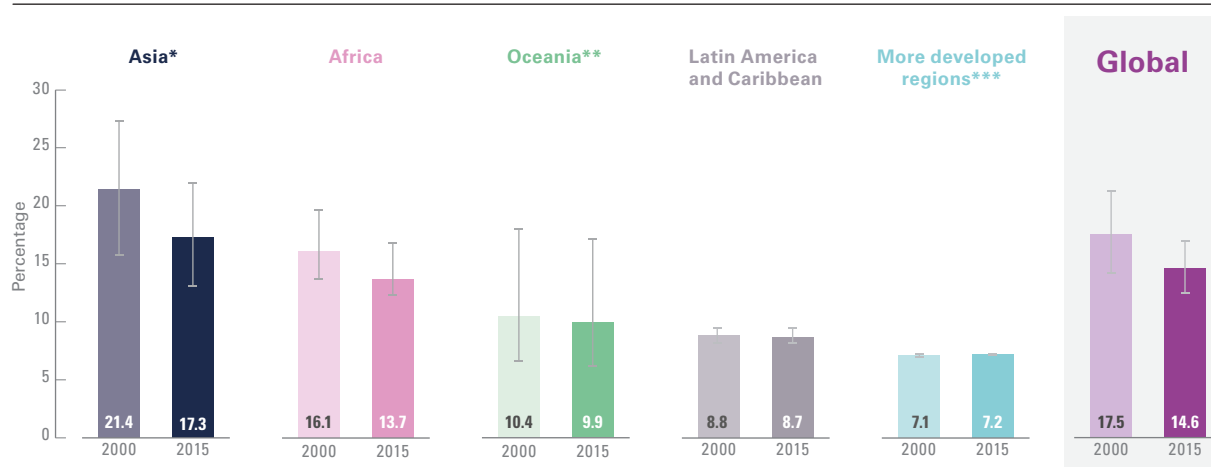
SUB-REGIONAL (2000, 2015)

Figure 2: Low birthweight prevalence, by United Nations region and sub-region, 2000 and 2015

Source: UNICEF-WHO Low birthweight estimates, 2019. NOTE: *Asia and Eastern Asia exclude Japan. **Oceania excludes Australia and New Zealand. ***More developed regions include Northern America, Europe, Japan and Australia and New Zealand. None of the changes between 2000 and 2015 were statistically significant for any sub-region or region).

NEARLY HALF OF ALL LOW BIRTHWEIGHT BABIES ARE BORN IN SOUTHERN ASIA

REGIONAL AND GLOBAL (2000, 2015)
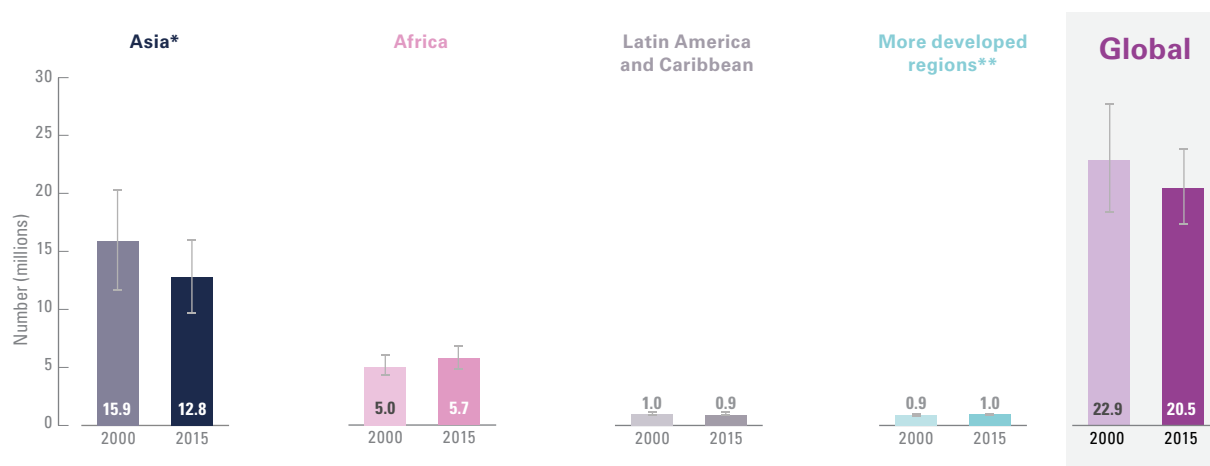
SUB-REGIONAL (2000, 2015)
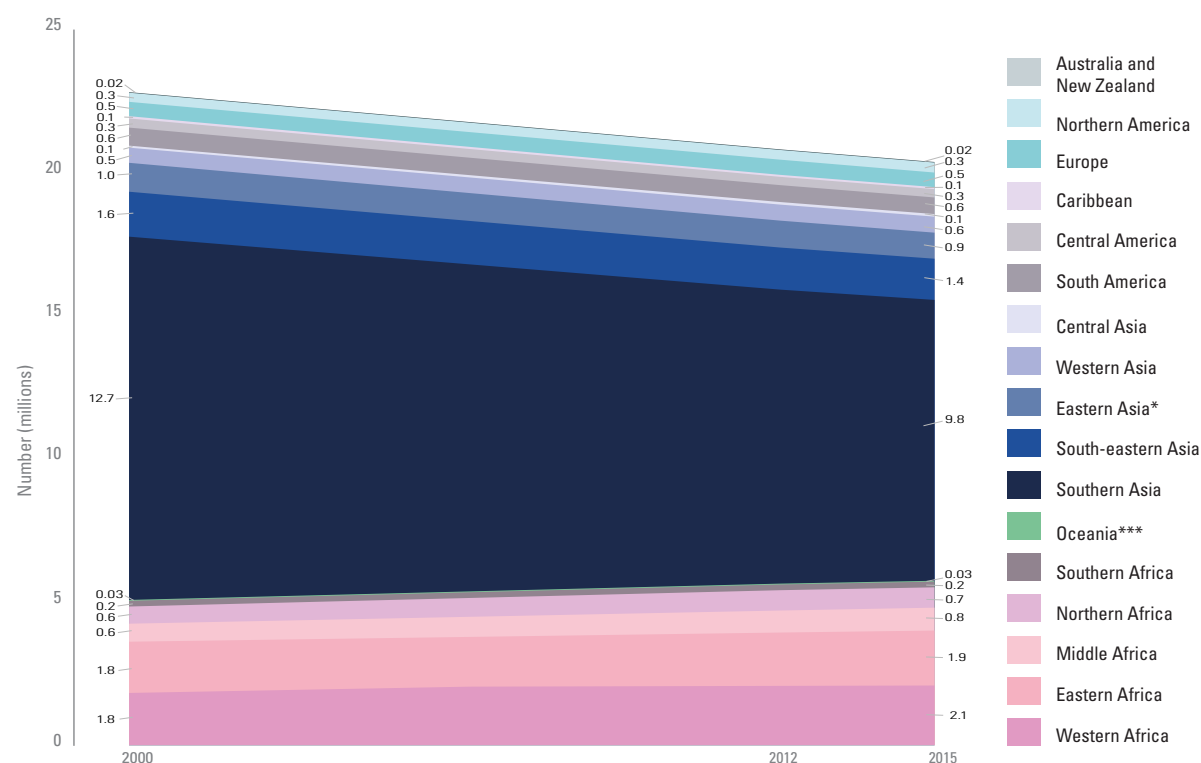
Figure 3: Number (millions) of low birthweight newborns, by United Nations region and sub-region, 2000, 2015

Source: UNICEF-WHO Low birthweight estimates, 2019. Note: *Asia and Eastern Asia exclude Japan. **More developed regions include Northern America, Europe, Japan and Australia and New Zealand. ***Oceania excludes Australia and New Zealand and has a very small value (0.03 million), presented as a faint green line in the sub-regional area graph; the value is too small to appear in the regional bar graph. See Annex 1 for confidence intervals for all regions and sub-regions; none of the changes between 2000 and 2015 were statistically significant for any sub-region or region. This figure was originally published in *The Lancet Global Health* on 15 May 2019 under the title "National, regional, and worldwide estimates of low birthweight in 2015, with trends from 2000: a systematic analysis" and is available online at <http://dx.doi.org/10.1016/S2214-109X(18)30565-5>.

PROGRESS IN REDUCING LOW BIRTHWEIGHT HAS BEEN STAGNANT SINCE 2000
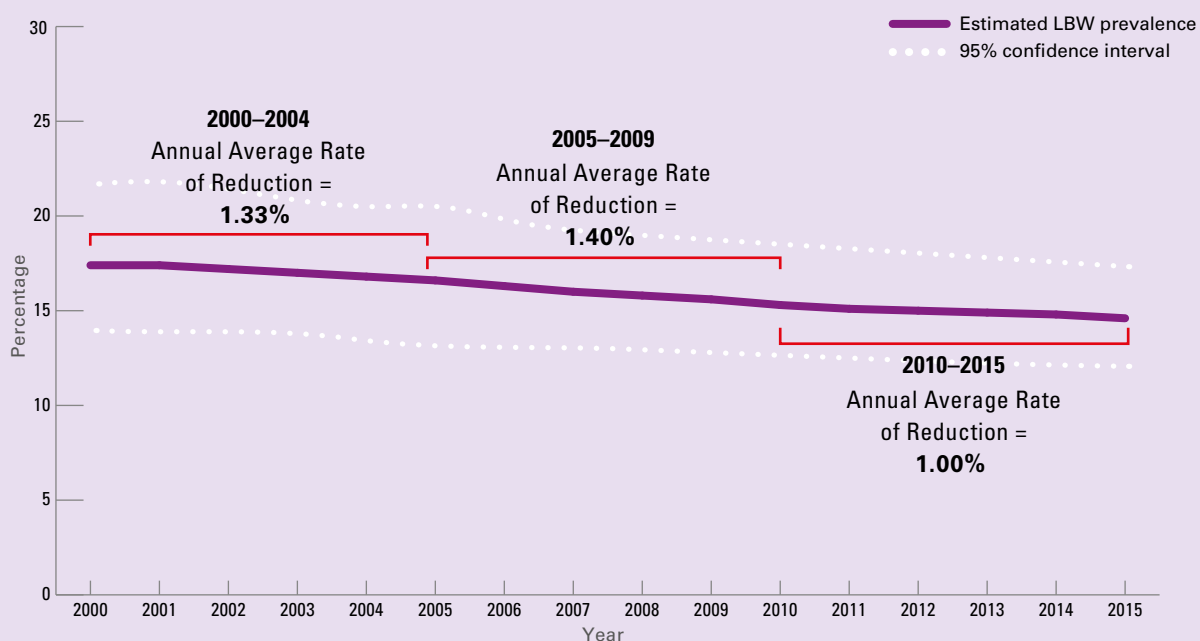
Figure 4. Global trend in low birthweight prevalence, 2000–2015 with annual average rate of reduction (AARR) by time-period.

Source: UNICEF-WHO Low birthweight estimates, 2019. Note: for detailed notes refer to Annex 2.

Progress in reducing low birthweight has been stagnant since the year 2000 – particularly during the most recent period from 2010 to 2015. The world is not on track to meet the WHA global target on low birthweight, and without accelerated action on prevention we will not achieve the goal of a 30 per cent reduction in low birthweight by 2025.

Important work lies ahead. The **annual average rate of reduction (AARR)** in low birthweight is 1.00 per cent per year in the most recent period from 2010 to 2015. But an AARR of 2.74 per cent per year between 2012 and 2025 is required to meet the global target of 10.5 per cent low birthweight prevalence.

IF SLOW PROGRESS CONTINUES, WE WILL ONLY BE A THIRD OF THE WAY TO THE TARGET IN 2025

TARGET — To achieve the target of 10.5% LBW prevalence by 2025, we need an AARR of 2.74%

PROJECTED — If the AARR for the period between 2010 and 2015 of 1.00% continues, LBW prevalence will only reach 13.2% by 2025

START — 2012 LBW prevalence = 15.0%

Inforgraphic 2. Progress towards the 2025 low birthweight prevalence target when applying the required AARR vs the actual AARR from the most recent period (actual AARR for the 2010 to 2015 period).

Source: UNICEF-WHO Low birthweight estimates, 2019. Note: for detailed notes refer to Annex 2.

The decline in low birthweight prevalence was particularly slow from 2010 to 2015, compared with the period from 2000 to 2009 *(Figure 4)*. If the current AARR of 1.00 per cent per year continues until 2025, the projected low birthweight prevalence would only be 13.2 per cent by 2025 – instead of the 10.5 percent target.

Considering the poor progress to date, the 2030 SDG target was set at the same 30 per cent reduction in low birthweight prevalence between 2012 and 2030. However, even with these added five years, the current AARR is still too low to achieve the 10.5 prevalence target by 2030.

BIRTHWEIGHT DATA ARE NOT AVAILABLE FOR 40 MILLION NEWBORNS, MORE THAN HALF OF THEM FROM AFRICA

Birthweight data were not available for nearly one third, or 39.7 million newborns, in 2015 *(Figure 5)*. These estimates reflect newborns who were unweighed and those who were weighed but whose birthweights were not captured by key data sources. Estimates from household surveys include births where weight was not available from an official document (e.g. health card) or could not be recalled by the respondent at the time of interview. Estimates from administrative systems (e.g. Health Management Information Systems) include unweighed births and weighed births not recorded in the system.

Countries without a recent estimate for the percentage of unrecorded birthweights were not included in this analysis; there were 37 such countries in 2015, including all countries in Oceania***.

Africa was home to the highest percentage of newborns without a recorded birthweight (51.7 per cent, or 21.5 million births); in West Africa, the percentage was 68.1 per cent (9.3 million births).

Among countries with recent data, 12 had a percentage of unrecorded birthweights greater than 70 per cent, rendering their data unsuitable for generating low birthweight estimates *(see Annex 2)*.

GLOBALLY, NEARLY ONE THIRD OF NEWBORNS HAD NO BIRTHWEIGHT DATA IN 2015
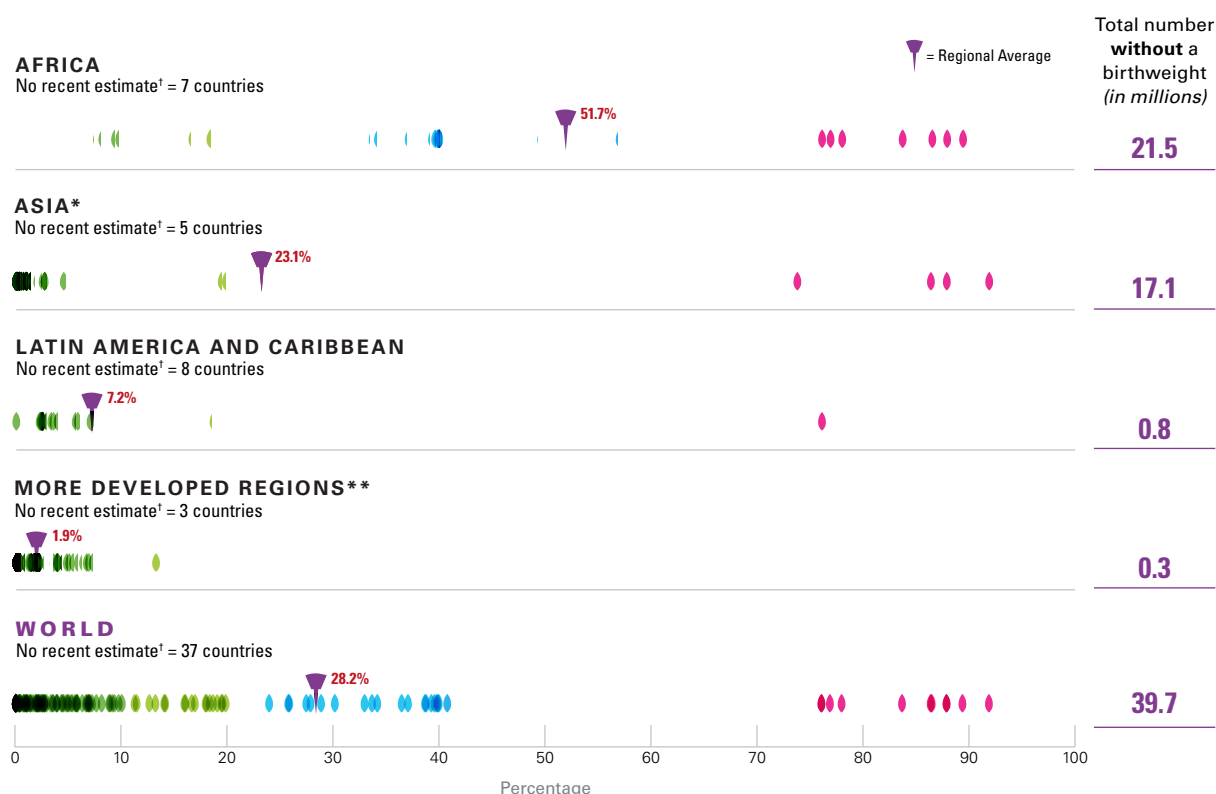
Figure 5: Estimated percentage of newborns without data on birthweight, by country (ovals) and region, 2015

Source: UNICEF-WHO Low birthweight estimates, 2019. Note: *Asia excludes Japan. **More developed regions include Northern America, Europe, Japan and Australia and New Zealand. ***Oceania was not shown due to lack of a recent (2010–2016) estimate for any country. Each oval represents the most recent estimate between 2010 and 2016 for each individual country. †No recent estimate refers to countries without an estimate or those whose most recent estimate was prior to 2010. Estimates from administrative sources were derived by subtracting 100% from the number of live births reported in the source divided by the number of annual live births in the United Nations Population Division World Population Prospects, 2017 edition for the same year. Estimates from household surveys represent the percentage of live births among women age 15–49 years in the survey reference period without a birthweight in the dataset.

About half of all data points that were suitable for generating the UNICEF-WHO low birthweight estimates came from More Developed Regions (Figure 6), yet these regions accounted for less than 5 per cent of all low birthweight births in 2015. Among the More Developed Regions, an average of 14.2 data points per country were included in the database for the 2000 to 2016 period. In contrast, only three data points on average were included per country in Africa, and only 0.4 per country in Oceania over the same period.

The type of data available on low birthweight vary by region. Nearly all available data points (94 per cent) in More Developed Regions were drawn from high coverage administrative data sources, indicated by dark blue blocks in Figure 6. In contrast, in Africa, nearly two thirds of all data points were adjusted from household surveys, and only 18 per cent came from high coverage administrative sources.

Greater support is needed to help national governments improve data collection and reporting on low birthweight. Improving the quality and coverage of birthweight reporting, including by strengthening national data monitoring and surveillance systems, will be critical to reduce low birthweight going forward.

ON AVERAGE, AFRICAN COUNTRIES ONLY HAD THREE USABLE BIRTHWEIGHT DATA POINTS BETWEEN 2000 AND 2016
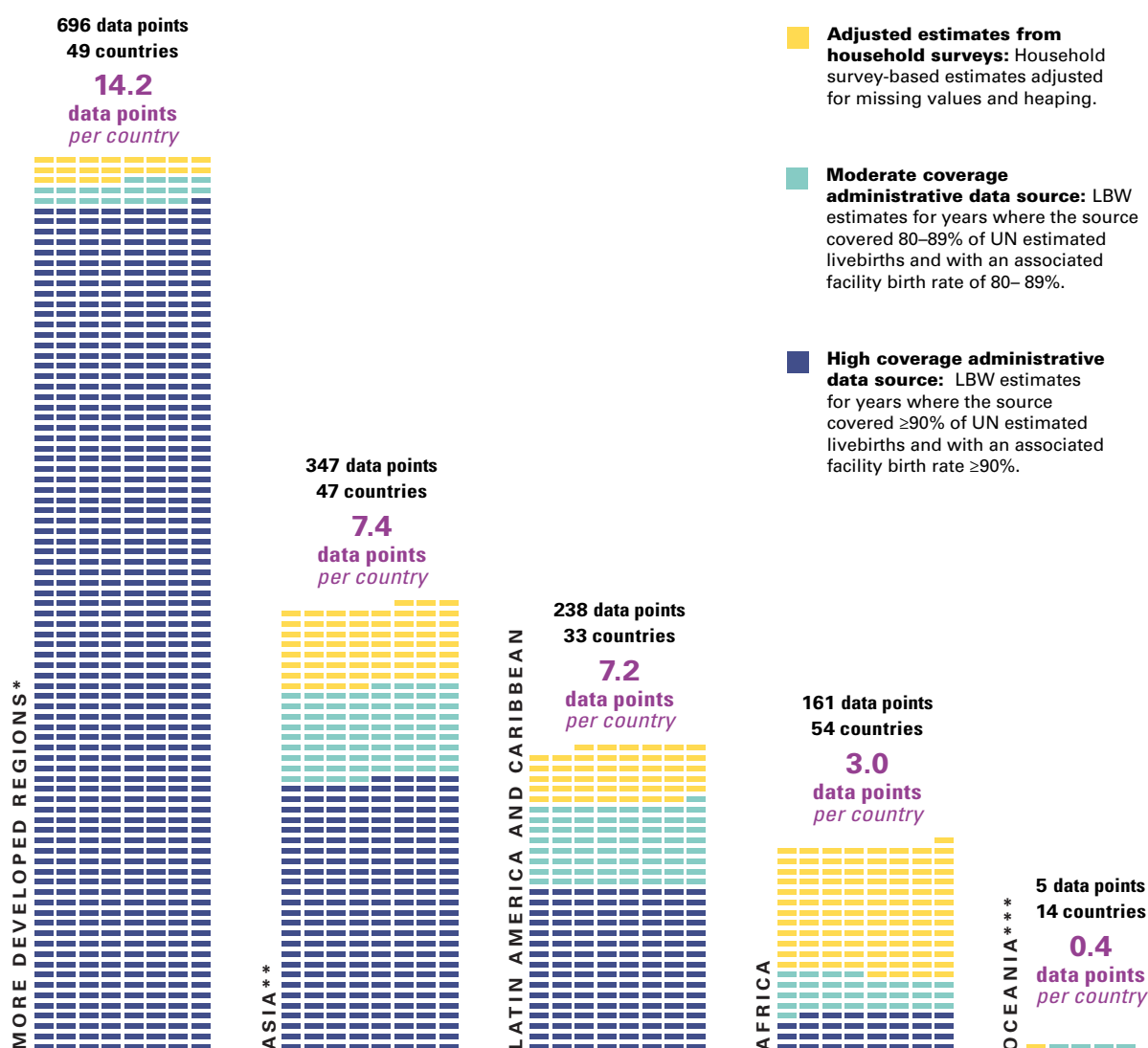
Figure 6: Number of data points in the 2019 database, by data source and United Nations region

Source: UNICEF-WHO Low birthweight estimates, 2019. Note: *More developed regions include Northern America, Europe, Japan and Australia and New Zealand. **Asia excludes Japan. ***Oceania excludes Australia and New Zealand. For further details see Annex 1, Data Tables and Annex 2, Notes on Data.

THE TIME TO ACT ON LOW BIRTHWEIGHT IS NOW

"Evidence-based interventions are available to keep mothers and babies healthy before, during and after pregnancy and delivery."

Babies born at a healthy weight are more likely to survive and thrive – while the 20.5 million babies born at low birthweight enter the world at a marked disadvantage. This report indicates that nearly 15 per cent of all infants worldwide are born with low birthweight, jeopardizing their survival, health and development. Almost all of them – 95 per cent – are born in less developed regions. Slow progress on reducing the prevalence of low birthweight in all regions and sub-regions threatens to undermine global efforts to end preventable newborn deaths and reduce the number of children suffering from stunting and wasting.

Given the links between fetal undernutrition and the long-term risk of chronic disease,[1] the lack of progress also fuels the growing epidemic of adult overweight and noncommunicable diseases, especially in less developed regions.

This report highlights gaps in the availability and quality of birthweight data across countries and regions. Indeed, nearly one third, or 39.7 million babies born in 2015 have no birthweight data. More than 21 million of these births were in Africa. In addition, low birthweight prevalence could not be reliably estimated for 54 countries due to poor

data availability or quality. Where national estimates were available, underreporting from populations at greatest risk for low birthweight led to a potential underestimation of prevalence.[2] The report thus highlights the need to strengthen the quality and coverage of birthweight reporting, especially in less developed regions. This involves improving access to skilled health care providers and well-equipped facilities, while ensuring that the birthweight data reported through routine administrative systems are accurate and complete. Such improvements are also likely to strengthen the collection of birthweight data in household surveys.[3]

Evidence-based interventions are available to keep mothers and babies healthy before, during and after pregnancy and delivery. Recommended actions include promoting girls' and women's access to nutritious, safe, affordable and sustainable diets; delivering micronutrient supplementation to address vitamin and mineral deficiencies; monitoring maternal weight gain; and providing nutritional counselling during pregnancy.[4] Early and continued access to high-quality antenatal care and perinatal services is also important for preventing malaria and other infections, managing pregnancy-associated conditions such as pre-eclampsia, ending medically unnecessary inductions and caesarean sections, monitoring fetal growth, and promoting smoking cessation. Among infants born with low birthweight, early essential newborn care and nutritional support are fundamental to improving neonatal survival.[5, 6] These investments in nutrition and health should be underpinned by efforts to prevent adolescent pregnancies and address gender inequities and other social determinants of low birthweight.

The causes of low birthweight differ across settings.[7] In more developed regions, low birthweight is associated with prematurity (defined as a baby born earlier than 37 weeks of pregnancy) as a result of high maternal age, smoking, multi-parity, and caesarean section. In less developed regions, low birthweight is primarily caused by poor fetal growth linked to poor maternal nutrition before and during pregnancy. Understanding the role of prematurity and poor fetal growth as causes of low birthweight is an important step in developing effective prevention programmes.[4]

It is not too late to achieve the WHA goal of a 30 per cent reduction in low birthweight between 2012 and 2025[4] – but the time for action is now. With the data presented in this report, governments and other stakeholders can evaluate progress towards the WHA and other targets including those in the Every Newborn Action Plan and the Global Strategy for Women's, Children's and Adolescents' Health – for the first time.

Coupled with global target tracking tools,[8] policymakers can track annual average rates of reduction in low birthweight at national levels and set national targets. This report therefore sets governments on the path to better data systems and programmes on low birthweight prevention, which have the potential to improve the pregnancy experiences of countless women and safeguard the survival, growth, development and long-term health of their children.

Low birthweight global and regional prevalence and numbers affected

	Percentage LBW [95% confidence interval]			LBW numbers in millions [95% confidence interval]		
	2000	**2012***	**2015**	**2000**	**2012***	**2015**
GLOBAL	17.5 [14.1–21.3]	15.0 [12.7–17.8]	**14.6 [12.4–17.1]**	22.9 [18.4–27.8]	20.9 [17.7–24.8]	20.5 [17.4–24.0]
UNITED NATIONS (Total countries = 197; 5 unclassified[4])						
Less Developed Regions	18.7 [14.9–22.9]	15.8 [13.3–18.9]	**15.4 [12.9–18.2]**	22.0 [17.5–26.9]	19.9 [16.7–23.8]	19.5 [16.4–23.0]
Africa	16.1 [13.7–19.7]	14.1 [12.3–16.9]	**13.7 [12.3–16.7]**	5.0 [4.3–6.2]	5.6 [4.9–6.7]	5.7 [5.1–6.9]
Eastern Africa	16.1 [12.5–21.0]	13.8 [11.3–17.5]	13.4 [11.1–17.1]	1.8 [1.4–2.3]	1.9 [1.6–2.4]	1.9 [1.6–2.5]
Middle Africa	14.3 [11.8–17.2]	12.8 [11.0–15.1]	12.5 [10.7–14.8]	0.6 [0.5–0.8]	0.8 [0.7–0.9]	0.8 [0.7–0.9]
Northern Africa	13.7 [10.4–19.3]	12.4 [9.5–17.8]	12.2 [9.4–17.9]	0.6 [0.5–0.8]	0.7 [0.5–1.0]	0.7 [0.5–1.0]
Southern Africa	15.0 [12.3–19.0]	14.3 [11.5–18.2]	14.2 [11.5–18.2]	0.2 [0.2–0.3]	0.2 [0.2–0.3]	0.2 [0.2–0.3]
Western Africa	17.9 [13.4–25.8]	15.6 [11.7–22.3]	15.2 [11.7–22.3]	1.8 [1.4–2.6]	2.0 [1.5–2.9]	2.1 [1.6–3.1]
Asia[1]	21.4 [15.7–27.5]	17.8 [13.5–22.7]	**17.3 [13.1–21.7]**	15.9 [11.7–20.4]	13.3 [10.1–17.0]	12.8 [9.7–16.1]
Central Asia	6.0 [5.1–6.9]	5.6 [5.0–6.4]	5.4 [4.8–6.1]	0.1 [0.1–0.1]	0.1 [0.1–0.1]	0.1 [0.1–0.1]
Eastern Asia[1]	5.8 [4.6–7.3]	5.1 [4.1–6.4]	5.1 [4.0–6.5]	1.0 [0.8–1.3]	0.9 [0.8–1.2]	0.9 [0.7–1.2]
Southern Asia	32.3 [22.4–44.0]	27.2 [18.9–37.1]	26.4 [18.6–35.2]	12.7 [8.8–17.3]	10.3 [7.1–14.0]	9.8 [6.9–13.1]
South-Eastern Asia	13.7 [10.1–16.7]	12.4 [9.7–14.8]	12.3 [9.5–14.7]	1.6 [1.2–1.9]	1.5 [1.2–1.8]	1.4 [1.1–1.7]
Western Asia	10.9 [9.0–13.7]	10.0 [8.2–12.5]	9.9 [8.1–12.5]	0.5 [0.4–0.7]	0.6 [0.5–0.7]	0.6 [0.5–0.7]
Latin America and Caribbean	8.8 [8.1–9.6]	8.7 [8.0–9.6]	**8.7 [8.1–9.6]**	1.0 [0.9–1.1]	0.9 [0.9–1.0]	**0.9 [0.9–1.0]**
Caribbean	10.5 [8.4–14.2]	10.1 [7.7–13.7]	9.9 [7.8–13.3]	0.1 [0.1–0.1]	0.1 [0.1–0.1]	0.1 [0.1–0.1]
Central America	9.1 [7.7–10.9]	8.8 [7.2–10.5]	8.7 [7.4–10.5]	0.3 [0.3–0.4]	0.3 [0.2–0.4]	0.3 [0.2–0.4]
South America	8.5 [8.0–9.1]	8.6 [8.2–9.2]	8.6 [8.2–9.2]	0.6 [0.6–0.7]	0.6 [0.6–0.6]	0.6 [0.6–0.6]
Oceania[2]	10.4 [6.5–18.0]	10.0 [6.0–16.5]	**9.9 [6.0–17.1]**	0.03 [0.02–0.04]	0.03 [0.02–0.05]	**0.03 [0.02–0.05]**
More Developed Regions[3]	7.1 [7.0–7.3]	7.2 [7.1–7.4]	**7.2 [7.0–7.3]**	0.9 [0.9–1.0]	1.0 [1.0–1.0]	**1.0 [1.0–1.0]**
Australia/New Zealand	6.3 [6.2–6.4]	6.2 [6.1–6.2]	6.4 [6.3–6.5]	0.02 [0.02–0.02]	0.02 [0.02–0.02]	0.02 [0.02–0.02]
Europe	6.8 [6.6–7.1]	6.6 [6.4–6.8]	6.5 [6.3–6.8]	0.5 [0.5–0.5]	0.5 [0.5–0.5]	0.5 [0.5–0.5]
Northern America	7.3 [7.2–7.5]	7.9 [7.9–7.9]	7.9 [7.8–8.0]	0.3 [0.3–0.3]	0.3 [0.3–0.3]	0.3 [0.3–0.3]
UNICEF (Total countries = 202; 0 unclassified[4])						
East Asia and Pacific	8.9 [6.5–11.4]	8.0 [6.1–10.2]	**7.9 [6.0–10.2]**	2.7 [2.0–3.5]	2.5 [1.9–3.3]	**2.5 [1.9–3.2]**
Europe and Central Asia	7.5 [6.6–8.7]	7.0 [6.3–7.9]	**6.9 [6.1–8.0]**	0.8 [0.7–0.9]	0.8 [0.7–0.9]	**0.8 [0.7–0.9]**
Eastern Europe and Central Asia	8.2 [6.8–9.9]	7.1 [6.2–8.2]	7.0 [6.0–8.3]	0.4 [0.4–0.5]	0.4 [0.4–0.5]	0.4 [0.4–0.5]
Western Europe	6.8 [6.2–7.5]	6.9 [6.4–7.5]	6.9 [6.3–7.6]	0.3 [0.3–0.4]	0.3 [0.3–0.4]	0.3 [0.3–0.4]
Latin America and Caribbean	8.9 [7.5–10.6]	8.8 [7.6–10.5]	**8.8 [7.5–10.5]**	1.0 [0.9–1.2]	1.0 [0.8–1.1]	**0.9 [0.8–1.1]**
Middle East and North Africa	12.5 [7.4–21.9]	11.4 [6.9–20.2]	**11.3 [6.7–20.1]**	1.0 [0.6–1.7]	1.1 [0.7–2.0]	**1.1 [0.7–2.0]**
North America	7.3 [7.2–7.5]	7.9 [7.9–7.9]	**7.9 [7.8–8.0]**	0.3 [0.3–0.3]	0.3 [0.3–0.3]	**0.3 [0.3–0.3]**
South Asia	33.1 [20.9–46.7]	27.9 [18.2–40.2]	**27.0 [17.5–38.7]**	12.6 [7.9–17.8]	10.1 [6.6–14.6]	**9.7 [6.3–13.9]**
sub-Saharan Africa	16.5 [10.3–25.5]	14.4 [9.4–22.5]	**14.0 [9.1–22.0]**	4.6 [2.9–7.2]	5.1 [3.3–8.8]	**5.2 [3.4–8.2]**
Eastern and Southern Africa	16.2 [10.2–24.4]	14.1 [9.3–21.6]	13.7 [9.1–21.1]	2.3 [1.5–3.5]	2.5 [1.6–3.8]	2.5 [1.7–3.8]
West and Central Africa	16.8 [10.4–26.6]	14.7 [9.5–23.5]	14.3 [9.1–22.9]	2.3 [1.4–3.7]	2.6 [1.7–4.2]	2.7 [1.7–4.3]
WHO (Total countries = 195; 8 unclassified[4])						
African Region	16.1 [10.3–24.5]	14.0 [9.3–21.5]	**13.7 [9.0–21.1]**	4.4 [2.8–6.7]	4.8 [3.2–7.4]	**4.9 [3.3–7.6]**
Region of the Americas	8.5 [7.4–9.7]	8.5 [7.6–9.8]	**8.5 [7.6–9.8]**	1.3 [1.2–1.6]	1.3 [1.2–1.5]	**1.3 [1.1–1.5]**
Eastern Mediterranean Region	19.4 [9.9–36.1]	17.5 [9.4–33.2]	**17.1 [9.2–32.4]**	2.7 [1.4–5.0]	2.9 [1.6–5.6]	**2.9 [1.6–5.6]**
Europe Region	7.9 [6.7–9.6]	7.3 [6.3–8.7]	**7.3 [6.1–8.7]**	0.8 [0.7–1.0]	0.8 [0.7–1.0]	**0.8 [0.7–1.0]**
South-East Asia Region	30 [19.7–40.1]	25.0 [17.1–33.5]	**24.2 [16.4–32.1]**	11.9 [7.8–15.9]	9.3 [6.4–12.4]	**8.8 [6.0–11.7]**
Western Pacific Region	8.0 [5.9–10.2]	7.3 [5.6–9.3]	**7.2 [5.6–9.3]**	1.9 [1.4–2.4]	1.8 [1.4–2.3]	**1.8 [1.4–2.3]**
World Bank Income (Total countries = 196; 6 unclassified[4])						
Low Income	17.3 [14.2–21.2]	14.8 [12.6–17.6]	**14.3 [12.3–17.5]**	3.1 [2.6–3.8]	3.3 [2.8–3.9]	**3.3 [2.9–4.1]**
Lower-Middle Income	24.9 [18.4–31.8]	20.6 [16.2–26.1]	**19.9 [15.6–24.7]**	16.0 [11.9–20.5]	13.9 [10.9–17.6]	**13.5 [10.6–16.7]**
Upper-Middle Income	8.1 [7.3–9.3]	7.4 [6.7–8.6]	**7.3 [6.6–8.6]**	2.9 [2.6–3.3]	2.8 [2.5–3.2]	**2.7 [2.5–3.2]**
High Income	7.2 [7.0–7.5]	7.6 [7.4–8.0]	**7.6 [7.3–8.0]**	0.9 [0.9–0.9]	1.0 [0.9–1.0]	**1.0 [0.9–1.0]**

Source: UNICEF-WHO Low birthweight estimates, 2019.

Notes:
1 Asia and Eastern Asia exclude Japan
2 Oceania excludes Australia and New Zealand
3 More Developed Regions include Northern America, Europe, Japan and
  Australia and New Zealand; however Japan is not shown as a sub-region.
4. 'Unclassified' refers to countries that are not included in this regional grouping

but are included in the country list to enable reporting on the regional grouping with the highest number of countries (UNICEF 202 countries); other regional classifications have a subset of these countries (5 to 8 countries) which are not classified into a regional grouping.
* 2012 is the WHA Nutrition target baseline year.

Low birthweight global and regional data details

	Total number of countries	Number of countries by basis of estimate[1]			Percentage of countries with an estimate[2]	Accepted country input data details				Average number of accepted input data points per country
		b-spline	hierarchical regression †	no estimate		Number of accepted input data points by source type[3]				
						High coverage administrative estimates	Moderate coverage administrative estimates	Household Surveys (adjusted)	Total	
GLOBAL	202	57	91	54	73%	1026	192	229	1447	7.2
UNITED NATIONS (Total countries = 197; 5 unclassified[7])										
Less Developed Regions	146	21	79	46	68%	353	172	210	735	5.0
Africa	54	2	34	18	67%	29	31	101	161	**3.0**
Eastern Africa	18	2	10	6	67%	23	8	37	68	3.8
Middle Africa	9	0	7	2	78%	0	4	19	23	2.6
Northern Africa	6	0	3	3	50%	0	0	3	3	0.5
Southern Africa	5	0	5	0	100%	4	16	12	32	6.4
Western Africa	16	0	9	7	56%	2	3	30	35	2.2
Asia[4]	47	13	24	10	79%	212	72	63	347	**7.4**
Central Asia	5	2	3	0	100%	39	32	14	85	17.0
Eastern Asia[4]	4	1	2	1	75%	16	0	6	22	5.5
Southern Asia	9	1	5	3	67%	22	0	8	30	3.3
South-Eastern Asia	11	3	7	1	91%	40	6	21	67	6.1
Western Asia	18	6	7	5	72%	95	34	14	143	7.9
Latin America and Caribbean	33	7	19	7	79%	128	65	45	238	**7.2**
Caribbean	13	1	5	7	46%	20	12	10	42	3.2
Central America	8	1	7	0	100%	27	24	11	62	7.8
South America	12	5	7	0	100%	81	29	24	134	11.2
Oceania[5]	14	0	2	12	14%	0	4	1	5	**0.4**
More Developed Regions[6]	49	35	12	2	96%	657	20	19	696	**14.2**
Australia/New Zealand	2	2	0	0	100%	32	0	0	32	16.0
Europe	44	30	12	2	95%	579	20	19	618	14.0
Northern America	2	2	0	0	100%	30	0	0	30	15.0
UNICEF (Total countries = 202; 0 unclassified[7])										
East Asia and Pacific	33	7	11	15	55%	104	10	28	142	**4.3**
Europe and Central Asia	54	35	16	3	94%	650	70	41	761	**14.1**
Eastern Europe and Central Asia	21	12	9	0	100%	211	63	41	315	15.0
Western Europe	33	23	7	3	91%	439	7	0	446	13.5
Latin America and Caribbean	37	7	19	11	70%	128	65	45	238	**6.4**
Middle East and North Africa	19	3	9	7	63%	63	16	9	88	**4.6**
North America	2	2	0	0	100%	30	0	0	30	**15.0**
South Asia	8	1	5	2	75%	22	0	8	30	**3.8**
sub-Saharan Africa	49	2	31	16	67%	29	31	98	158	**3.2**
Eastern and Southern Africa	25	2	16	7	72%	27	24	50	101	4.0
West and Central Africa	24	0	15	9	63%	2	7	48	57	2.4
WHO (Total countries = 195; 8 unclassified[7])										
African Region	47	3	32	12	74%	45	31	99	175	**3.7**
Region of the Americas	35	9	19	7	80%	158	65	45	268	**7.7**
Eastern Mediterranean Region	21	2	7	12	43%	46	9	7	62	**3.0**
Europe Region	53	35	16	2	96%	650	70	41	761	**14.4**
South-East Asia Region	11	2	7	2	82%	34	3	15	52	**4.7**
Western Pacific Region	27	6	9	12	56%	92	7	21	120	**4.4**
World Bank Income (Total countries = 196; 6 unclassified[7])										
Low Income	31	0	18	13	58%	3	3	62	68	**2.2**
Lower-Middle Income	52	5	33	14	73%	80	63	99	242	4.7
Upper-Middle Income	55	16	25	14	75%	292	90	66	448	8.1
High Income	58	36	14	8	86%	651	32	2	685	**11.8**

1. Details on each of the three types of estimates are availabe in Annex 2: Notes on the data.
2. The percentage of countries with annual estimates (b-spline + hierarchical regression) in the database in each region.
3. Details on each of the three types of input data are availabe in Annex 2: Notes on the data.
4. Asia and Eastern Asia exclude Japan.
5. Oceania excludes Australia and New Zealand.

6. More Developed Regions include Australia and New Zealand, Europe, Northern America, and Japan, but Japan does not belong to a sub-region and hence is not included within any of the sub-regions.
7. 'Unclassified' refers to countries that are not included in this regional grouping but are included in the country list to enable reporting on the regional grouping with the highest number of

countries (UNICEF 202 countries); other regional classifications have a subset of these countries (5 to 8 countries) which are not classified into a regional grouping.

† This includes one country (India) for which the estimate was based on partial data for the most recent survey, therefore modeled estimates are not shown for the individual country but counted here.

Low birthweight country prevalence and numbers affected

Country	Percentage LBW [95% confidence interval]			LBW numbers in thousands [95% confidence interval]		
	2000	2012*	2015	2000	2012*	2015
Afghanistan						
Albania	4.9 [3.9–6.0]	4.6 [3.7–5.9]	4.6 [3.6–5.8]	2.5 [2.0–3.1]	1.6 [1.3–2.0]	1.6 [1.3–2.0]
Algeria	7.7 [6.2–10.1]	7.3 [5.8–9.6]	7.3 [5.7–9.6]	47.1 [37.7–61.3]	68.9 [54.7–90.5]	68.8 [54.5–91.6]
Andorra	7.5 [6.1–9.5]	7.5 [5.9–9.4]	7.4 [6.0–9.4]	0.1 [0.0–0.1]	0.1 [0.0–0.1]	0.1 [0.0–0.1]
Angola	18.0 [13.7–23.4]	15.8 [12.0–21.6]	15.3 [11.8–21.4]	146.7 [111.3–190.5]	174.7 [133.5–239.5]	180.2 [139.7–253.0]
Anguilla						
Antigua and Barbuda	9.4 [7.4–12.3]	9.1 [7.1–11.7]	9.1 [7.1–11.6]	0.2 [0.1–0.2]	0.1 [0.1–0.2]	0.1 [0.1–0.2]
Argentina	7.4 [7.1–7.7]	7.1 [7.0–7.3]	7.3 [7.1–7.6]	53.1 [50.9–55.3]	53.6 [52.5–54.7]	55.4 [53.4–57.3]
Armenia	8.2 [7.4–8.9]	8.0 [7.7–8.2]	9.0 [8.2–9.7]	3.2 [2.9–3.5]	3.4 [3.3–3.5]	3.6 [3.3–3.9]
Australia	6.3 [6.2–6.4]	6.3 [6.2–6.3]	6.5 [6.4–6.6]	15.6 [15.3–15.8]	19.1 [18.9–19.3]	20.3 [20.0–20.5]
Austria	6.4 [6.3–6.5]	6.9 [6.8–6.9]	6.5 [6.4–6.6]	5.1 [5.0–5.2]	5.5 [5.4–5.6]	5.4 [5.3–5.5]
Azerbaijan	6.5 [6.2–6.8]	7.0 [6.9–7.2]	7.3 [6.4–8.2]	9.2 [8.8–9.6]	12.3 [12.0–12.6]	12.8 [11.3–14.4]
Bahamas	13.4 [10.5–17.6]	13.2 [10.4–17.1]	13.1 [10.4–17.1]	0.7 [0.6–0.9]	0.7 [0.6–0.9]	0.7 [0.6–1.0]
Bahrain	8.5 [7.9–9.1]	10.2 [9.7–10.6]	11.9 [10.9–12.9]	1.3 [1.2–1.3]	2.1 [2.0–2.2]	2.6 [2.3–2.8]
Bangladesh	36.2 [22.0–50.9]	29.0 [20.1–40.4]	27.8 [19.6–38.5]	1,318.0 [799.1–1,851.4]	921.3 [637.9–1,284.5]	864.8 [610.2–1,196.2]
Barbados						
Belarus	5.0 [4.9–5.1]	4.9 [4.8–5.1]	5.1 [4.6–5.5]	4.5 [4.4–4.6]	5.6 [5.4–5.7]	5.8 [5.2–6.3]
Belgium	7.2 [6.9–7.4]	6.9 [6.8–7.0]	7.3 [6.9–7.6]	8.2 [7.9–8.5]	8.8 [8.7–8.9]	9.4 [9.0–9.8]
Belize	9.0 [7.1–11.3]	8.7 [6.9–11.1]	8.6 [6.8–11.1]	0.7 [0.5–0.8]	0.7 [0.5–0.9]	0.7 [0.6–0.9]
Benin	18.7 [14.7–23.6]	17.2 [13.6–21.5]	16.9 [13.3–21.3]	54.6 [42.8–69.0]	64.6 [51.3–80.8]	67.0 [52.8–84.3]
Bhutan	13.8 [9.8–21.3]	11.9 [8.5–19.1]	11.7 [8.2–18.5]	2.2 [1.6–3.4]	1.8 [1.2–2.8]	1.7 [1.2–2.7]
Bolivia (Plurinational State of)	8.0 [6.2–10.6]	7.3 [5.7–9.8]	7.2 [5.7–9.3]	20.5 [15.9–27.4]	18.5 [14.5–24.8]	18.3 [14.3–23.6]
Bosnia and Herzegovina	3.5 [2.9–4.4]	3.4 [2.7–4.3]	3.4 [2.7–4.2]	1.5 [1.2–1.8]	1.1 [0.9–1.4]	1.1 [0.9–1.4]
Botswana	16.3 [12.8–20.8]	15.9 [12.4–21.0]	15.6 [12.3–20.6]	7.8 [6.1–9.9]	8.3 [6.5–11.0]	8.3 [6.6–11.0]
Brazil	7.8 [7.6–8.0]	8.4 [8.4–8.5]	8.4 [8.3–8.5]	276.9 [269.9–283.9]	254.9 [252.7–257.1]	248.6 [245.1–252.2]
British Virgin Islands						
Brunei Darussalam	10.3 [7.6–12.9]	12.1 [11.5–12.7]	10.8 [8.8–12.7]	0.7 [0.5–0.9]	0.8 [0.8–0.8]	0.7 [0.6–0.9]
Bulgaria	8.6 [8.4–8.8]	9.4 [9.2–9.7]	9.6 [9.1–10.0]	5.6 [5.5–5.8]	6.6 [6.4–6.7]	6.4 [6.1–6.7]
Burkina Faso	15.8 [11.2–20.2]	13.5 [10.0–17.5]	13.1 [9.7–16.3]	85.1 [60.5–108.9]	92.0 [68.3–119.2]	94.0 [69.6–116.8]
Burundi	17.4 [11.9–22.9]	15.5 [10.9–19.8]	15.1 [10.9–19.4]	47.6 [32.7–62.8]	62.8 [44.4–80.4]	66.2 [47.7–84.8]
Cabo Verde						
Cambodia	15.4 [9.2–20.7]	12.6 [7.8–17.1]	12.1 [7.6–16.4]	52.4 [31.3–70.5]	46.1 [28.6–62.9]	44.6 [27.9–60.3]
Cameroon	13.1 [10.4–16.6]	12.1 [9.6–15.7]	12.0 [9.3–15.2]	83.1 [66.0–105.1]	98.3 [77.7–126.9]	100.7 [78.4–128.2]
Canada	5.5 [5.4–5.6]	6.2 [6.1–6.2]	6.4 [6.2–6.6]	18.4 [17.9–18.8]	23.8 [23.6–24.0]	24.7 [23.8–25.6]
Central African Republic	15.4 [11.9–19.9]	14.8 [11.5–18.8]	14.5 [11.3–18.1]	23.2 [18.0–29.9]	24.8 [19.3–31.4]	24.1 [18.8–30.1]
Chad						
Chile	5.2 [5.1–5.3]	6.0 [6.0–6.1]	6.2 [6.1–6.4]	13.6 [13.3–13.8]	14.7 [14.5–14.8]	14.9 [14.6–15.2]
China	5.8 [4.5–7.3]	5.0 [4.0–6.4]	5.0 [3.9–6.4]	940.6 [735.7–1,192.3]	874.0 [687.8–1,109.4]	846.9 [659.5–1,095.2]
Colombia	10.5 [8.3–13.3]	10.0 [7.9–13.0]	10.0 [7.7–13.2]	89.0 [70.0–113.2]	77.2 [60.6–99.9]	74.3 [57.8–98.3]
Comoros	25.9 [20.7–32.4]	24.2 [19.3–30.1]	23.7 [18.9–29.8]	5.3 [4.2–6.6]	6.1 [4.8–7.6]	6.1 [4.9–7.7]
Congo	13.5 [10.6–17.6]	11.8 [9.4–15.3]	11.6 [9.1–15.1]	17.1 [13.5–22.3]	20.3 [16.0–26.2]	20.5 [16.1–26.6]
Cook Islands	3.7 [2.8–4.7]	3.5 [2.7–4.6]	3.5 [2.7–4.5]	0.0 [0.0–0.0]	0.0 [0.0–0.0]	0.0 [0.0–0.0]
Costa Rica	7.0 [6.9–7.1]	7.3 [7.2–7.3]	7.5 [7.4–7.5]	5.3 [5.3–5.4]	5.2 [5.1–5.2]	5.2 [5.2–5.3]
Côte d'Ivoire	17.5 [15.7–25.5]	15.8 [14.2–22.8]	15.5 [13.7–22.4]	118.9 [106.2–173.1]	128.7 [115.3–185.0]	132.7 [118.0–192.6]
Croatia	5.4 [4.9–6.0]	4.8 [4.6–5.1]	5.1 [4.9–5.3]	2.5 [2.2–2.7]	2.0 [1.9–2.1]	2.0 [1.9–2.1]
Cuba	6.1 [6.0–6.2]	5.2 [5.1–5.3]	5.3 [5.2–5.4]	8.9 [8.7–9.0]	6.6 [6.4–6.7]	6.6 [6.5–6.7]
Cyprus						
Czechia	5.8 [5.7–5.9]	7.9 [7.7–8.0]	7.8 [7.7–8.0]	5.1 [5.1–5.2]	8.8 [8.6–9.0]	8.5 [8.4–8.7]
Democratic People's Republic of Korea						
Democratic Republic of the Congo	12.4 [8.7–15.8]	11.1 [8.7–14.0]	10.8 [8.5–13.5]	269.6 [190.0–344.5]	339.6 [264.7–427.8]	354.4 [277.8–441.0]
Denmark	5.1 [4.8–5.5]	5.3 [5.2–5.4]	5.3 [5.1–5.6]	3.4 [3.2–3.6]	3.1 [3.1–3.2]	3.2 [3.0–3.3]
Djibouti						

* 2012 is the WHA Nutrition target baseline year.

Low birthweight country data details

Country	Basis of annual estimates[1] from 2000 to 2015	High coverage administrative estimates	Moderate coverage administrative estimates	Household Surveys (adjusted)	Total	Average number of data points per year[3]
		Country input data details				
		Number of data points meeting inclusion criteria by source type[2]				
Afghanistan	No estimate	0	0	0	0	0.0
Albania	Hierarchical regression	15	0	3	18	1.1
Algeria	Hierarchical regression	0	0	1	1	0.1
Andorra	Hierarchical regression	13	0	0	13	0.8
Angola	Hierarchical regression	0	0	1	1	0.1
Anguilla	No estimate	0	0	0	0	0.0
Antigua and Barbuda	Hierarchical regression	0	4	0	4	0.3
Argentina	b-spline	16	0	0	16	1.0
Armenia	b-spline	10	6	4	20	1.3
Australia	b-spline	16	0	0	16	1.0
Austria	b-spline	16	0	0	16	1.0
Azerbaijan	b-spline	10	4	1	15	0.9
Bahamas	Hierarchical regression	6	1	0	7	0.4
Bahrain	b-spline	11	4	0	15	0.9
Bangladesh	Hierarchical regression	0	0	1	1	0.1
Barbados	No estimate	0	0	0	0	0.0
Belarus	b-spline	15	0	2	17	1.1
Belgium	b-spline	15	0	0	15	0.9
Belize	Hierarchical regression	0	0	1	1	0.1
Benin	Hierarchical regression	0	0	4	4	0.3
Bhutan	Hierarchical regression	0	0	1	1	0.1
Bolivia (Plurinational State of)	Hierarchical regression	0	0	4	4	0.3
Bosnia and Herzegovina	Hierarchical regression	0	0	2	2	0.1
Botswana	Hierarchical regression	4	7	0	11	0.7
Brazil	b-spline	14	2	0	16	1.0
British Virgin Islands	No estimate	0	0	0	0	0.0
Brunei Darussalam	b-spline	13	1	0	14	0.9
Bulgaria	b-spline	16	0	0	16	1.0
Burkina Faso	Hierarchical regression	2	3	2	7	0.4
Burundi	Hierarchical regression	0	0	2	2	0.1
Cabo Verde	No estimate	0	0	0	0	0.0
Cambodia	Hierarchical regression	0	0	3	3	0.2
Cameroon	Hierarchical regression	0	0	5	5	0.3
Canada	b-spline	14	0	0	14	0.9
Central African Republic	Hierarchical regression	0	0	3	3	0.2
Chad	No estimate	0	0	0	0	0.0
Chile	b-spline	15	0	0	15	0.9
China	Hierarchical regression	0	0	2	2	0.1
Colombia	Hierarchical regression	0	16	4	20	1.3
Comoros	Hierarchical regression	0	0	2	2	0.1
Congo	Hierarchical regression	0	0	2	2	0.1
Cook Islands	Hierarchical regression	0	4	0	4	0.3
Costa Rica	b-spline	14	0	1	15	0.9
Côte d'Ivoire	Hierarchical regression	0	0	4	4	0.3
Croatia	b-spline	16	0	0	16	1.0
Cuba	b-spline	14	2	1	17	1.1
Cyprus	No estimate	0	0	0	0	0.0
Czechia	b-spline	16	0	0	16	1.0
Democratic People's Republic of Korea	No estimate	0	0	0	0	0.0
Democratic Republic of the Congo	Hierarchical regression	0	0	4	4	0.3
Denmark	b-spline	15	0	0	15	0.9
Djibouti	No estimate	0	0	0	0	0.0

1. Details on each of the three types of estimates are availabe in Annex 2 - Notes on the data.
2. Details on each of the three types of input data are availabe in Annex 2 - Notes on the data.
3. The total number of data points was divided by 16 to get the average per year, given that input data were sought for each year from 2000 to 2016.

Low birthweight country prevalence and numbers affected, *continued*

Country	Percentage LBW [95% confidence interval]			LBW numbers in thousands [95% confidence interval]		
	2000	2012*	2015	2000	2012*	2015
Dominica						
Dominican Republic	11.6 [9.2–15.2]	11.4 [8.8–15.1]	11.3 [8.7–15.0]	25.1 [19.8–32.7]	25.0 [19.2–33.1]	24.4 [18.8–32.4]
Ecuador	12.0 [9.4–15.2]	11.3 [8.9–14.2]	11.2 [8.7–14.2]	37.8 [29.5–47.9]	37.2 [29.2–46.8]	37.0 [28.8–47.1]
Egypt						
El Salvador	11.0 [8.5–13.9]	10.4 [8.1–13.5]	10.3 [8.0–13.3]	16.0 [12.5–20.3]	12.4 [9.7–16.1]	12.2 [9.4–15.7]
Equatorial Guinea						
Eritrea						
Estonia	4.3 [4.2–4.5]	4.4 [4.2–4.6]	4.3 [4.0–4.7]	0.6 [0.5–0.6]	0.6 [0.6–0.7]	0.6 [0.6–0.7]
Eswatini	11.1 [9.0– 14.8]	10.5 [8.3–13.8]	10.3 [7.9–13.7]	3.8 [3.1–5.1]	4.0 [3.2–5.3]	4.0 [3.0–5.3]
Ethiopia						
Fiji						
Finland	4.3 [4.2–4.4]	4.2 [4.1–4.3]	4.1 [4.0–4.3]	2.5 [2.4–2.5]	2.5 [2.4–2.5]	2.4 [2.4–2.5]
France	7.5 [6.0–9.4]	7.4 [6.0–9.3]	7.4 [5.9–9.5]	56.7 [45.2–71.0]	57.8 [46.2–72.0]	57.0 [45.0–72.5]
Gabon	15.3 [11.8–19.8]	14.4 [11.4–19.0]	14.2 [11.2–18.8]	6.3 [4.9–8.2]	8.0 [6.3–10.5]	8.2 [6.5–10.9]
Gambia	19.2 [15.1–23.9]	17.2 [13.7–22.1]	16.8 [13.5–21.0]	10.7 [8.5–13.4]	12.8 [10.3–16.5]	13.3 [10.7–16.6]
Georgia	6.1 [5.7–6.6]	4.8 [4.4–5.3]	6.1 [5.6–6.6]	3.5 [3.2–3.7]	2.9 [2.6–3.1]	3.4 [3.1–3.6]
Germany	6.5 [6.4–6.6]	6.8 [6.7–6.9]	6.6 [6.1–7.2]	48.5 [47.9–49.1]	47.0 [46.1–47.9]	47.2 [43.3–51.1]
Ghana	16.1 [12.7–20.0]	14.5 [11.4–19.2]	14.2 [11.3–18.5]	108.1 [85.3–134.9]	122.8 [96.6–162.4]	123.3 [98.6–161.3]
Greece	9.0 [7.2–11.4]	8.7 [6.9–11.0]	8.7 [6.9–11.2]	10.0 [8.0–12.5]	9.2 [7.3–11.5]	8.2 [6.5–10.5]
Grenada						
Guatemala	12.2 [9.0–15.5]	11.2 [8.4–14.2]	11.0 [8.3–14.0]	50.4 [37.0–64.2]	45.7 [34.3–58.0]	45.7 [34.7–58.3]
Guinea						
Guinea-Bissau	25.3 [19.4–32.8]	21.8 [16.9–28.4]	21.1 [16.7–27.4]	13.0 [10.0–16.9]	13.8 [10.7–18.0]	13.9 [11.0–18.0]
Guyana	16.3 [12.4–20.6]	15.8 [12.4–19.9]	15.6 [12.2–19.6]	3.2 [2.4–4.0]	2.5 [2.0–3.2]	2.5 [1.9–3.1]
Haiti						
Holy See						
Honduras	11.9 [9.1–14.9]	11.0 [8.6–13.9]	10.9 [8.6–13.8]	25.4 [19.4–31.8]	22.0 [17.1–27.6]	21.6 [16.9–27.4]
Hungary	8.6 [8.3–8.9]	8.6 [8.5–8.7]	8.8 [8.4–9.1]	8.2 [8.0–8.5]	7.7 [7.6–7.9]	7.7 [7.4–8.0]
Iceland	3.5 [3.0–3.9]	3.9 [3.5–4.2]	4.2 [3.9–4.5]	0.1 [0.1–0.2]	0.2 [0.2–0.2]	0.2 [0.2–0.2]
India**						
Indonesia	11.2 [7.9–14.6]	10.2 [7.4–12.8]	10.0 [7.4–12.7]	515.9 [363.5–672.3]	514.1 [372.6–647.5]	497.6 [368.8–631.9]
Iran (Islamic Republic of)						
Iraq						
Ireland	4.9 [4.7–5.1]	5.3 [5.2–5.4]	5.9 [5.6–6.2]	2.8 [2.7–2.9]	3.8 [3.8–3.9]	4.0 [3.8–4.2]
Israel	8.3 [8.2–8.5]	8.0 [7.9–8.1]	7.8 [7.5–8.1]	10.6 [10.4–10.8]	13.2 [13.0–13.3]	13.0 [12.5–13.4]
Italy	7.1 [5.6–8.9]	7.0 [5.6–8.8]	7.0 [5.4–8.6]	37.8 [30.0–47.7]	36.3 [29.2–45.6]	34.5 [26.8–42.5]
Jamaica	15.3 [11.8–19.7]	14.7 [11.5–18.8]	14.6 [11.4–18.9]	8.7 [6.7–11.2]	7.3 [5.7–9.3]	7.0 [5.5–9.1]
Japan	8.6 [8.5–8.7]	9.6 [9.5–9.6]	9.5 [9.4–9.5]	100.0 [98.8–101.2]	103.6 [103.2–104.0]	100.0 [99.4–100.5]
Jordan	14.6 [11.4–19.2]	13.9 [11.0–18.1]	13.8 [11.0–18.4]	23.2 [18.2–30.6]	31.6 [25.0–41.2]	33.5 [26.7–44.7]
Kazakhstan	6.1 [5.6–6.6]	6.1 [6.0–6.2]	5.4 [5.0–5.9]	14.5 [13.3–15.7]	23.7 [23.1–24.2]	20.9 [19.1–22.7]
Kenya	12.3 [9.8–15.5]	11.7 [9.3–14.7]	11.5 [8.9–14.5]	154.7 [122.4–194.4]	171.7 [136.7–215.6]	172.4 [134.0–217.7]
Kiribati						
Kuwait	10.2 [8.0–13.3]	9.9 [7.7–12.8]	9.9 [7.8–12.7]	4.5 [3.5–5.9]	6.2 [4.8–7.9]	6.4 [5.0–8.2]
Kyrgyzstan	6.8 [5.3–8.3]	5.6 [5.5–5.7]	5.5 [5.2–5.8]	7.2 [5.6–8.8]	8.4 [8.2–8.6]	8.4 [8.0–8.9]
Lao People's Democratic Republic	20.4 [12.6–27.7]	17.7 [11.9–23.2]	17.3 [11.6–22.6]	34.7 [21.3–46.9]	29.3 [19.6–38.3]	28.2 [18.9–36.8]
Latvia	5.1 [5.0–5.3]	4.5 [4.4–4.7]	4.5 [4.4–4.6]	1.0 [1.0–1.0]	1.0 [0.9–1.0]	0.9 [0.9–0.9]
Lebanon	9.8 [7.7–12.6]	9.3 [7.4–12.0]	9.2 [7.3–11.7]	6.1 [4.8–7.8]	6.8 [5.4–8.8]	7.9 [6.2–10.0]
Lesotho	15.4 [12.1–20.1]	14.8 [11.7–19.4]	14.6 [11.5–19.3]	9.1 [7.1–11.9]	8.9 [7.0–11.6]	8.9 [7.1–11.8]
Liberia						
Libya						
Liechtenstein						
Lithuania	4.8 [3.7–6.0]	4.5 [3.7–5.6]	4.5 [3.6–5.8]	1.6 [1.2–2.0]	1.4 [1.2–1.8]	1.4 [1.1–1.8]

*The estimate is based on partial data for the most recent survey, therefore modeled estimates are not shown for the individual country.

* 2012 is the WHA Nutrition target baseline year.

Low birthweight country data details, *continued*

Country	Basis of annual estimates[1] from 2000 to 2015	High coverage administrative estimates	Moderate coverage administrative estimates	Household Surveys (adjusted)	Total	Average number of data points per year[3]
		Country input data details				
		Number of data points meeting inclusion criteria by source type[2]				
Dominica	No estimate	0	0	0	0	0.0
Dominican Republic	Hierarchical regression	0	0	6	6	0.4
Ecuador	Hierarchical regression	4	3	0	7	0.4
Egypt	No estimate	0	0	0	0	0.0
El Salvador	Hierarchical regression	0	7	1	8	0.5
Equatorial Guinea	No estimate	0	0	0	0	0.0
Eritrea	No estimate	0	0	0	0	0.0
Estonia	b-spline	16	0	0	16	1.0
Eswatini	Hierarchical regression	0	0	4	4	0.3
Ethiopia	No estimate	0	0	0	0	0.0
Fiji	No estimate	0	0	0	0	0.0
Finland	b-spline	16	0	0	16	1.0
France	Hierarchical regression	4	0	0	4	0.3
Gabon	Hierarchical regression	0	0	2	2	0.1
Gambia	Hierarchical regression	0	0	1	1	0.1
Georgia	b-spline	8	8	1	17	1.1
Germany	b-spline	14	0	0	14	0.9
Ghana	Hierarchical regression	0	0	4	4	0.3
Greece	Hierarchical regression	16	0	0	16	1.0
Grenada	No estimate	0	0	0	0	0.0
Guatemala	Hierarchical regression	5	2	2	9	0.6
Guinea	No estimate	0	0	0	0	0.0
Guinea-Bissau	Hierarchical regression	0	0	2	2	0.1
Guyana	Hierarchical regression	0	0	4	4	0.3
Haiti	No estimate	0	0	0	0	0.0
Holy See	No estimate	0	0	0	0	0.0
Honduras	Hierarchical regression	0	0	2	2	0.1
Hungary	b-spline	16	0	0	16	1.0
Iceland	b-spline	16	0	0	16	1.0
India**	Partial data					
Indonesia	Hierarchical regression	0	0	4	4	0.3
Iran (Islamic Republic of)	No estimate	0	0	0	0	0.0
Iraq	No estimate	0	0	0	0	0.0
Ireland	b-spline	15	0	0	15	0.9
Israel	b-spline	16	0	0	16	1.0
Italy	Hierarchical regression	11	2	0	13	0.8
Jamaica	Hierarchical regression	0	1	2	3	0.2
Japan	b-spline	16	0	0	16	1.0
Jordan	Hierarchical regression	0	0	5	5	0.3
Kazakhstan	b-spline	15	0	4	19	1.2
Kenya	Hierarchical regression	0	0	3	3	0.2
Kiribati	No estimate	0	0	0	0	0.0
Kuwait	Hierarchical regression	8	0	0	8	0.5
Kyrgyzstan	b-spline	12	0	4	16	1.0
Lao People's Democratic Republic	Hierarchical regression	0	0	1	1	0.1
Latvia	b-spline	14	2	0	16	1.0
Lebanon	Hierarchical regression	5	0	0	5	0.3
Lesotho	Hierarchical regression	0	0	4	4	0.3
Liberia	No estimate	0	0	0	0	0.0
Libya	No estimate	0	0	0	0	0.0
Liechtenstein	No estimate	0	0	0	0	0.0
Lithuania	Hierarchical regression	14	2	0	16	1.0

1. Details on each of the three types of estimates are availabe in Annex 2 - Notes on the data.
2. Details on each of the three types of input data are availabe in Annex 2 - Notes on the data.
3. The total number of data points was divided by 16 to get the average per year, given that input data were sought for each year from 2000 to 2016.
**The estimate is based on partial data for the most recent survey, therefore modeled estimates are not shown for the individual country.

Low birthweight country prevalence and numbers affected, *continued*

Country	Percentage LBW [95% confidence interval]			LBW numbers in thousands [95% confidence interval]		
	2000	2012*	2015	2000	2012*	2015
Luxembourg	6.6 [5.7–7.5]	6.8 [6.5–7.1]	6.5 [6.3–6.8]	0.4 [0.3–0.4]	0.4 [0.4–0.4]	0.4 [0.4–0.4]
Madagascar	19.8 [13.3–26.6]	17.5 [11.9–23.2]	17.1 [11.7–22.9]	128.9 [86.5–173.4]	134.6 [91.8–178.7]	139.1 [94.8–185.7]
Malawi	17.2 [13.6–21.6]	14.9 [11.7–18.6]	14.5 [11.3–18.5]	86.7 [68.4–108.9]	92.8 [72.9–116.3]	94.5 [73.8–120.9]
Malaysia	10.0 [9.8–10.1]	11.3 [11.2–11.4]	11.3 [11.1–11.6]	50.5 [49.7–51.4]	56.7 [56.0–57.4]	59.5 [58.3–60.6]
Maldives	15.6 [10.4–21.5]	12.0 [8.6–17.6]	11.7 [8.0–17.9]	1.0 [0.7–1.4]	0.9 [0.7–1.3]	0.9 [0.6–1.4]
Mali						
Malta	5.9 [5.6–6.2]	7.0 [6.6–7.4]	6.3 [6.1–6.6]	0.3 [0.2–0.3]	0.3 [0.3–0.3]	0.3 [0.3–0.3]
Marshall Islands						
Mauritania						
Mauritius	12.7 [12.2–13.2]	17.0 [16.6–17.3]	17.1 [16.6–17.6]	2.6 [2.5–2.6]	2.4 [2.4–2.5]	2.3 [2.2–2.4]
Mexico	8.2 [6.5–10.4]	8.0 [6.2–10.2]	7.9 [6.2–10.2]	200.6 [159.1–253.9]	186.7 [144.4–239.1]	183.3 [144.7–237.2]
Micronesia (Federated States of)						
Monaco	5.5 [4.4–7.0]	5.4 [4.4–7.0]	5.4 [4.3–7.0]	0.0 [0.0–0.0]	0.0 [0.0–0.0]	0.0 [0.0–0.0]
Mongolia	6.3 [4.9–8.1]	5.5 [4.3–7.1]	5.4 [4.2–6.9]	2.9 [2.3–3.8]	3.9 [3.1–5.1]	3.9 [3.1–5.0]
Montenegro	5.3 [5.0–5.6]	5.2 [4.9–5.5]	5.5 [5.2–5.7]	0.4 [0.4–0.5]	0.4 [0.4–0.4]	0.4 [0.4–0.4]
Montserrat						
Morocco	18.8 [14.9–23.7]	17.5 [14.1–22.3]	17.3 [13.9–21.9]	120.3 [95.5–152.2]	124.2 [100.1–157.6]	122.5 [98.4–154.9]
Mozambique	16.7 [12.8–20.7]	14.1 [11.2–18.2]	13.8 [10.9–17.5]	136.3 [104.4–169.3]	147.8 [117.2–190.7]	152.7 [120.2–193.3]
Myanmar	13.9 [9.3–17.8]	12.5 [8.6–16.2]	12.3 [8.5–15.9]	156.8 [104.8–200.9]	121.4 [83.4–156.4]	116.2 [80.0–149.7]
Namibia	16.5 [12.7–21.1]	15.7 [12.5–20.2]	15.5 [12.3–19.7]	9.8 [7.6–12.6]	10.8 [8.6–13.9]	11.1 [8.8–14.2]
Nauru						
Nepal	27.2 [18.0–38.1]	22.6 [15.2–31.1]	21.8 [15.2–30.3]	206.6 [137.1–290.2]	133.5 [89.9–183.7]	125.0 [87.0–173.7]
Netherlands	7.1 [6.9–7.3]	6.2 [6.1–6.3]	6.2 [6.0–6.3]	14.0 [13.5–14.5]	11.0 [10.8–11.2]	11.0 [10.7–11.3]
New Zealand	6.6 [6.2–6.9]	5.9 [5.7–6.0]	5.7 [5.5–5.9]	3.7 [3.5–3.8]	3.7 [3.6–3.7]	3.5 [3.4–3.6]
Nicaragua	11.5 [8.9–14.8]	10.8 [8.7–14.0]	10.7 [8.4–13.2]	15.6 [12.1–19.9]	13.5 [10.9–17.5]	12.9 [10.2–16.0]
Niger						
Nigeria						
Niue						
North Macedonia	8.9 [7.9–9.9]	8.8 [8.2–9.3]	9.1 [8.4–9.7]	2.3 [2.1–2.6]	2.0 [1.9–2.2]	2.1 [2.0–2.3]
Norway	4.9 [4.8–5.0]	4.7 [4.6–4.8]	4.5 [4.4–4.5]	2.9 [2.8–2.9]	2.8 [2.8–2.9]	2.8 [2.7–2.8]
Oman	10.9 [8.1–14.0]	10.6 [8.1–13.4]	10.5 [8.1–13.6]	6.1 [4.5–7.8]	8.0 [6.1–10.2]	8.5 [6.6–11.0]
Pakistan						
Palau						
Panama	10.6 [8.3–13.5]	10.2 [7.9–12.9]	10.1 [7.9–12.7]	7.5 [5.9–9.6]	7.9 [6.2–10.1]	7.9 [6.2–10.0]
Papua New Guinea						
Paraguay	8.6 [6.7–11.2]	8.2 [6.3–10.7]	8.1 [6.5–10.6]	12.3 [9.6–16.1]	11.4 [8.8–14.9]	11.4 [9.1–15.0]
Peru	10.1 [7.9–13.1]	9.5 [7.4–12.1]	9.4 [7.2–12.2]	63.3 [49.1–81.5]	58.7 [45.8–74.8]	57.8 [44.5–74.8]
Philippines	21.5 [14.3–28.6]	20.4 [14.2–26.7]	20.1 [14.2–26.1]	498.1 [331.2–662.4]	479.5 [333.0–626.7]	480.7 [339.3–622.4]
Poland	5.7 [5.6–5.7]	5.7 [5.6–5.8]	5.9 [5.7–6.2]	21.5 [21.3–21.7]	22.0 [21.5–22.5]	21.7 [20.7–22.7]
Portugal	7.4 [6.8–8.0]	8.5 [8.4–8.6]	8.9 [8.8–9.0]	8.4 [7.7–9.1]	7.7 [7.6–7.8]	7.4 [7.3–7.5]
Qatar	9.1 [8.3–9.9]	7.5 [5.9–9.1]	7.3 [-1.2–15.9]	1.1 [1.0–1.2]	1.7 [1.3–2.1]	1.8 [-0.3–4.0]
Republic of Korea	3.8 [3.8–3.9]	5.4 [5.3–5.4]	5.8 [5.7–5.8]	21.9 [21.4–22.4]	24.1 [23.9–24.3]	25.9 [25.6–26.2]
Republic of Moldova	5.5 [4.3–7.0]	5.0 [4.0–6.3]	5.0 [4.0–6.3]	2.6 [2.1–3.4]	2.3 [1.8–2.8]	2.1 [1.7–2.7]
Romania	8.8 [6.9–11.1]	8.3 [6.6–10.3]	8.2 [6.5–10.5]	19.6 [15.4–24.7]	16.6 [13.2–20.7]	15.7 [12.5–20.1]
Russian Federation	7.4 [6.6–8.1]	6.0 [5.9–6.2]	5.8 [5.5–6.1]	97.7 [88.1–107.4]	110.9 [108.7–113.1]	107.5 [101.2–113.9]
Rwanda	10.3 [8.2–12.7]	8.2 [6.4–10.4]	7.9 [6.2–10.1]	31.8 [25.1–39.2]	29.9 [23.5–38.1]	29.1 [23.0–37.5]
Saint Kitts and Nevis						
Saint Lucia						
Saint Vincent and the Grenadines						
Samoa						
San Marino	3.3 [2.6–4.1]	3.3 [2.6–4.1]	3.3 [2.6–4.1]	0.0 [0.0–0.0]	0.0 [0.0–0.0]	0.0 [0.0–0.0]
Sao Tome and Principe	7.2 [5.4–9.2]	6.7 [5.1–8.6]	6.6 [5.0–8.6]	0.4 [0.3–0.5]	0.4 [0.3–0.6]	0.4 [0.3–0.6]

* 2012 is the WHA Nutrition target baseline year.

Low birthweight country data details, *continued*

Country	Basis of annual estimates[1] from 2000 to 2015	Country input data details				Average number of data points per year[3]
		Number of data points meeting inclusion criteria by source type[2]				
		High coverage administrative estimates	Moderate coverage administrative estimates	Household Surveys (adjusted)	Total	
Luxembourg	b-spline	15	0	0	15	0.9
Madagascar	Hierarchical regression	0	0	4	4	0.3
Malawi	Hierarchical regression	0	0	6	6	0.4
Malaysia	b-spline	14	0	0	14	0.9
Maldives	Hierarchical regression	7	0	1	8	0.5
Mali	No estimate	0	0	0	0	0.0
Malta	b-spline	16	0	0	16	1.0
Marshall Islands	No estimate	0	0	0	0	0.0
Mauritania	No estimate	0	0	0	0	0.0
Mauritius	b-spline	12	4	0	16	1.0
Mexico	Hierarchical regression	5	3	1	9	0.6
Micronesia (Federated States of)	No estimate	0	0	0	0	0.0
Monaco	Hierarchical regression	13	0	0	13	0.8
Mongolia	Hierarchical regression	0	0	4	4	0.3
Montenegro	b-spline	15	1	2	18	1.1
Montserrat	No estimate	0	0	0	0	0.0
Morocco	Hierarchical regression	0	0	1	1	0.1
Mozambique	Hierarchical regression	1	0	3	4	0.3
Myanmar	Hierarchical regression	0	0	1	1	0.1
Namibia	Hierarchical regression	0	0	3	3	0.2
Nauru	No estimate	0	0	0	0	0.0
Nepal	Hierarchical regression	0	0	3	3	0.2
Netherlands	b-spline	15	0	0	15	0.9
New Zealand	b-spline	16	0	0	16	1.0
Nicaragua	Hierarchical regression	0	0	2	2	0.1
Niger	No estimate	0	0	0	0	0.0
Nigeria	No estimate	0	0	0	0	0.0
Niue	No estimate	0	0	0	0	0.0
North Macedonia	b-spline	16	0	2	18	1.1
Norway	b-spline	16	0	0	16	1.0
Oman	Hierarchical regression	9	5	0	14	0.9
Pakistan	No estimate	0	0	0	0	0.0
Palau	No estimate	0	0	0	0	0.0
Panama	Hierarchical regression	3	12	1	16	1.0
Papua New Guinea	No estimate	0	0	0	0	0.0
Paraguay	Hierarchical regression	0	2	1	3	0.2
Peru	Hierarchical regression	0	0	7	7	0.4
Philippines	Hierarchical regression	0	0	4	4	0.3
Poland	b-spline	16	0	0	16	1.0
Portugal	b-spline	16	0	0	16	1.0
Qatar	b-spline	12	0	0	12	0.8
Republic of Korea	b-spline	16	0	0	16	1.0
Republic of Moldova	Hierarchical regression	3	11	2	16	1.0
Romania	Hierarchical regression	15	1	0	16	1.0
Russian Federation	b-spline	15	0	0	15	0.9
Rwanda	Hierarchical regression	0	0	3	3	0.2
Saint Kitts and Nevis	No estimate	0	0	0	0	0.0
Saint Lucia	No estimate	0	0	0	0	0.0
Saint Vincent and the Grenadines	No estimate	0	0	0	0	0.0
Samoa	No estimate	0	0	0	0	0.0
San Marino	Hierarchical regression	12	1	0	13	0.8
Sao Tome and Principe	Hierarchical regression	0	4	2	6	0.4

1. Details on each of the three types of estimates are availabe in Annex 2 - Notes on the data.
2. Details on each of the three types of input data are availabe in Annex 2 - Notes on the data.
3. The total number of data points was divided by 16 to get the average per year, given that input data were sought for each year from 2000 to 2016.

Country	Percentage LBW [95% confidence interval]			LBW numbers in thousands [95% confidence interval]		
	2000	2012*	2015	2000	2012*	2015
Saudi Arabia						
Senegal	22.0 [17.3–27.7]	18.9 [14.8–23.9]	18.5 [14.1–24.0]	85.5 [67.4–108.0]	97.8 [76.9–123.9]	100.1 [76.6–129.9]
Serbia	4.7 [3.8–5.8]	4.6 [3.7–5.8]	4.5 [3.6–5.7]	5.6 [4.5–6.9]	4.3 [3.5–5.5]	4.3 [3.4–5.3]
Seychelles	9.0 [8.0–10.1]	11.0 [9.8–12.3]	11.7 [8.8–14.5]	0.1 [0.1–0.2]	0.2 [0.2–0.2]	0.2 [0.1–0.2]
Sierra Leone	17.2 [13.3–21.6]	14.9 [11.8–18.8]	14.4 [11.4–18.1]	36.8 [28.6–46.3]	38.3 [30.3–48.3]	37.2 [29.4–46.7]
Singapore	9.8 [7.7–12.3]	9.7 [7.5–12.4]	9.6 [7.5–12.5]	4.9 [3.8–6.1]	4.7 [3.7–6.1]	4.8 [3.7–6.2]
Slovakia	6.8 [6.6–7.1]	8.0 [7.6–8.5]	7.6 [7.3–7.9]	3.7 [3.5–3.8]	4.6 [4.3–4.8]	4.3 [4.2–4.5]
Slovenia	5.6 [5.5–5.7]	6.2 [6.1–6.3]	6.1 [5.5–6.8]	1.0 [1.0–1.0]	1.3 [1.3–1.4]	1.3 [1.2–1.5]
Solomon Islands						
Somalia						
South Africa	15.0 [11.9–19.5]	14.3 [11.1–18.6]	14.2 [11.1–18.6]	166.9 [132.7–217.4]	167.6 [129.9–219.0]	167.1 [130.0–218.8]
South Sudan						
Spain	7.0 [6.8–7.2]	8.2 [8.1–8.3]	8.3 [8.2–8.4]	28.2 [27.4–28.9]	36.5 [36.1–36.8]	34.3 [33.9–34.8]
Sri Lanka	16.3 [15.6–17.1]	16.6 [16.4–16.8]	15.9 [15.6–16.1]	56.9 [54.3–59.4]	56.6 [55.7–57.4]	51.3 [50.5–52.1]
State of Palestine	8.8 [6.7–11.0]	8.5 [6.5–10.5]	8.4 [6.4–10.6]	10.6 [8.1–13.3]	12.0 [9.2–15.0]	12.6 [9.6–16.0]
Sudan						
Suriname	16.0 [12.3–20.4]	14.9 [11.5–19.3]	14.7 [11.4–18.7]	1.8 [1.4–2.2]	1.5 [1.2–2.0]	1.5 [1.2–1.9]
Sweden	4.5 [4.4–4.6]	3.8 [3.6–4.0]	2.4 [1.8–3.0]	4.1 [4.0–4.2]	4.3 [4.1–4.6]	2.9 [2.2–3.5]
Switzerland	6.0 [5.8–6.2]	6.5 [6.4–6.6]	6.5 [6.4–6.6]	4.6 [4.4–4.8]	5.4 [5.3–5.5]	5.6 [5.5–5.7]
Syrian Arab Republic						
Tajikistan	6.2 [4.5–7.8]	5.7 [4.3–7.1]	5.6 [4.4–7.3]	11.6 [8.5–14.7]	13.7 [10.4–17.2]	14.1 [10.9–18.2]
Thailand	13.5 [13.1–14.0]	10.8 [10.4–11.2]	10.5 [10.3–10.8]	123.6 [119.7–127.6]	82.8 [79.7–86.0]	76.3 [74.4–78.2]
Timor-Leste						
Togo	17.8 [14.2–22.2]	16.3 [12.9–20.5]	16.1 [12.8–20.3]	34.9 [27.9–43.4]	40.6 [32.1–51.0]	41.2 [32.8–52.0]
Tokelau						
Tonga						
Trinidad and Tobago	13.1 [10.2–17.2]	12.5 [9.9–16.3]	12.4 [9.5–16.0]	2.4 [1.9–3.2]	2.5 [2.0–3.3]	2.3 [1.8–3.0]
Tunisia	8.2 [6.5–11.0]	7.5 [6.0–9.8]	7.5 [5.9–9.9]	13.8 [10.9–18.4]	15.5 [12.3–20.0]	15.7 [12.3–20.9]
Turkey	12.9 [10.2–16.6]	11.6 [9.1–14.9]	11.4 [9.0–14.5]	176.8 [140.1–227.3]	150.6 [119.0–194.4]	147.5 [116.5–187.1]
Turkmenistan	5.4 [4.0–7.0]	5.0 [3.9–6.6]	4.9 [3.8–6.2]	5.8 [4.3–7.5]	7.0 [5.4–9.2]	7.1 [5.5–8.9]
Turks and Caicos Islands						
Tuvalu						
Uganda						
Ukraine	5.4 [5.4–5.5]	5.4 [5.3–5.4]	5.6 [5.4–5.9]	21.9 [21.6–22.1]	26.3 [26.1–26.6]	27.0 [25.9–28.0]
United Arab Emirates	13.0 [10.4–16.5]	12.7 [9.9–16.7]	12.7 [9.9–16.4]	6.9 [5.5–8.8]	11.8 [9.2–15.5]	11.6 [9.1–15.0]
United Kingdom of Great Britain and Northern Ireland	7.3 [7.2–7.4]	6.9 [6.9–7.0]	7.0 [6.9–7.0]	50.7 [50.3–51.2]	55.6 [55.2–56.0]	56.0 [55.6–56.4]
United Republic of Tanzania	12.4 [9.8–15.8]	10.7 [8.3–13.5]	10.5 [8.1–13.4]	179.4 [141.7–228.1]	211.7 [163.0–267.0]	219.0 [169.2–279.8]
United States of America	7.5 [7.4–7.6]	8.1 [8.0–8.1]	8.0 [7.9–8.1]	297.3 [292.5–302.2]	321.1 [319.6–322.7]	321.1 [317.8–324.3]
Uruguay	7.7 [7.5–8.0]	7.9 [7.7–8.1]	7.6 [7.4–7.8]	4.2 [4.0–4.3]	3.9 [3.8–4.0]	3.7 [3.6–3.8]
Uzbekistan	5.8 [4.4–7.5]	5.3 [4.1–7.0]	5.3 [4.1–6.7]	32.6 [24.8–42.3]	35.3 [26.9–46.1]	34.9 [27.1–44.7]
Vanuatu	11.1 [8.5–13.8]	11.0 [8.7–13.9]	10.9 [8.6–13.9]	0.7 [0.5–0.8]	0.7 [0.6–0.9]	0.8 [0.6–1.0]
Venezuela (Bolivarian Republic of)	8.6 [8.3–8.9]	8.6 [8.4–8.7]	9.1 [8.9–9.3]	50.3 [48.4–52.1]	51.7 [50.6–52.7]	54.8 [53.4–56.2]
Viet Nam	9.2 [5.6–12.6]	8.4 [5.8–11.2]	8.2 [5.8–10.6]	130.1 [78.3–178.0]	131.8 [91.8–176.1]	129.9 [91.3–167.6]
Yemen						
Zambia	13.5 [10.5–16.8]	11.9 [9.4–15.1]	11.6 [9.2–14.8]	63.6 [49.7–79.4]	69.3 [54.7–88.2]	71.9 [57.3–91.6]
Zimbabwe	12.4 [9.8–15.8]	12.8 [10.2–16.7]	12.6 [10.0–16.5]	50.8 [40.1–64.3]	67.4 [53.6–87.8]	67.6 [53.7–88.1]

* 2012 is the WHA Nutrition target baseline year.

Low birthweight country data details, *continued*

Country	Basis of annual estimates[1] from 2000 to 2015	High coverage administrative estimates	Moderate coverage administrative estimates	Household Surveys (adjusted)	Total	Average number of data points per year[3]
		Country input data details				
		Number of data points meeting inclusion criteria by source type[2]				
Saudi Arabia	No estimate	0	0	0	0	0.0
Senegal	Hierarchical regression	0	0	7	7	0.4
Serbia	Hierarchical regression	0	0	3	3	0.2
Seychelles	b-spline	10	4	0	14	0.9
Sierra Leone	Hierarchical regression	0	0	3	3	0.2
Singapore	Hierarchical regression	1	2	0	3	0.2
Slovakia	b-spline	16	0	0	16	1.0
Slovenia	b-spline	14	0	0	14	0.9
Solomon Islands	No estimate	0	0	0	0	0.0
Somalia	No estimate	0	0	0	0	0.0
South Africa	Hierarchical regression	0	9	1	10	0.6
South Sudan	No estimate	0	0	0	0	0.0
Spain	b-spline	16	0	0	16	1.0
Sri Lanka	b-spline	15	0	0	15	0.9
State of Palestine	Hierarchical regression	1	7	1	9	0.6
Sudan	No estimate	0	0	0	0	0.0
Suriname	Hierarchical regression	0	6	3	9	0.6
Sweden	b-spline	15	0	0	15	0.9
Switzerland	b-spline	16	0	0	16	1.0
Syrian Arab Republic	No estimate	0	0	0	0	0.0
Tajikistan	Hierarchical regression	12	3	3	18	1.1
Thailand	b-spline	12	3	2	17	1.1
Timor-Leste	No estimate	0	0	0	0	0.0
Togo	Hierarchical regression	0	0	3	3	0.2
Tokelau	No estimate	0	0	0	0	0.0
Tonga	No estimate	0	0	0	0	0.0
Trinidad and Tobago	Hierarchical regression	0	4	1	5	0.3
Tunisia	Hierarchical regression	0	0	1	1	0.1
Turkey	Hierarchical regression	4	0	2	6	0.4
Turkmenistan	Hierarchical regression	0	14	1	15	0.9
Turks and Caicos Islands	No estimate	0	0	0	0	0.0
Tuvalu	No estimate	0	0	0	0	0.0
Uganda	No estimate	0	0	0	0	0.0
Ukraine	b-spline	14	0	3	17	1.1
United Arab Emirates	Hierarchical regression	1	0	0	1	0.1
United Kingdom of Great Britain and Northern Ireland	b-spline	16	0	0	16	1.0
United Republic of Tanzania	Hierarchical regression	0	0	4	4	0.3
United States of America	b-spline	16	0	0	16	1.0
Uruguay	b-spline	16	0	1	17	1.1
Uzbekistan	Hierarchical regression	0	15	2	17	1.1
Vanuatu	Hierarchical regression	0	0	1	1	0.1
Venezuela (Bolivarian Republic of)	b-spline	16	0	0	16	1.0
Viet Nam	Hierarchical regression	0	0	6	6	0.4
Yemen	No estimate	0	0	0	0	0.0
Zambia	Hierarchical regression	0	0	4	4	0.3
Zimbabwe	Hierarchical regression	0	0	6	6	0.4

1. Details on each of the three types of estimates are availabe in Annex 2 - Notes on the data.
2. Details on each of the three types of input data are availabe in Annex 2 - Notes on the data.
3. The total number of data points was divided by 16 to get the average per year, given that input data were sought for each year from 2000 to 2016.

Methodological Notes:
Overview of processes for database development

The estimates presented in this brochure are not necessarily comparable with country reported values (especially those derived from household surveys) due to adjustments made for missing birthweights and heaping as well as modelling methods applied to generate annual estimates from 2000 to 2015.

In this section, we provide a brief description of the process for developing the 2000–2015 UNICEF-WHO low birthweight database and next steps for future updates. Methodology and estimates are explored further in a separate peer-reviewed paper.[1] The database was developed through a collaborative effort between UNICEF, WHO, London School of Hygiene and Tropical Medicine, and Johns Hopkins University. Prior to 2019, the database had been managed by UNICEF and applied simpler methods.[2]

Process for database development: The development of the country, regional and global database with annual estimates from 2000 to 2015 comprised the following steps:

1. Development of the country input dataset
   a) Identification of data sources
   b) Adjustments to account for missing birthweights and heaping for household survey-based estimates
2. Generation of preliminary country annual estimates and country consultations
3. Generation of the UNICEF-WHO 2019 low birthweight annual country, regional and global database 2000–2015

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1.a) Identification of data sources

Population-based nationally representative estimates containing information on birthweights or low birthweight among livebirths were obtained from:

i. National administrative sources: e.g. data from national systems including Civil Registration and Vital Statistics (CRVS) systems, national Health Management Information Systems (HMIS) and birth registries;

ii. Nationally representative household surveys of Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS).

Low birthweight estimates from administrative data sources for 2000–2016 were obtained through website searches of National Statistical Offices (NSO) and Ministry of Health (MoH) of all countries with a facility birth rate ≥80 per cent as of 2015. When more than one source was available for a given year, preference was given to NSO website data. The WHO regional databases and a UNICEF database for Eastern Europe and Central Asia (TRANSOMNEE)[3] were used to identify potential estimates for countries where data were not identified via searches of NSO and MoH websites. These data were only considered if they contained a reference to their source or could be verified as national administrative data from the NSO or MoH. For nationally representative household surveys, datasets were obtained for all DHS and MICS with a data collection start date of 1997 or later, and for which datasets were publicly available and contained birthweights.

Where national administrative or nationally representative survey data were not readily available through web searches, or where further details were needed on identified data sources, UNICEF and WHO regional and country offices were requested to provide details of any available national low birthweight data between September–December 2014 and again in during the same period in the following year.

1.b) Adjustments for missing birthweights and heaping for household survey-based estimates

For surveys meeting inclusion criteria (Table 1), birthweights were imputed for the sampled births that did not have a birthweight in the dataset, as well as for those with a birthweight considered to be implausible (i.e. <250g or >5,500g) by applying the Multiple Imputation (MI) command in Stata. The imputation model included the following variables: (i) mother's perception of size at birth;[*] and, (ii) maternal parity for MICS and these variables plus (iii) sex of child, (iv) multiple/singleton status, (v) maternal height and (vi) maternal body mass index for DHS.

Five imputations were performed for each survey. A separate step of fitting a finite mixture model of two normal distributions to the reported/imputed datasets was performed to address heaping. The mean birthweight and standard deviation were calculated for each of these distributions and used to calculate the low birthweight Z-score. The percentage low birthweight for each of the distributions was calculated as the percentage area under the curve $<Z_{2500}$. The overall percentage low birthweight for the dataset was calculated as the weighted average of percentage low birthweight from each distribution, based on

the proportion of the population estimated to belong to each of the two distributions. In addition to obtaining point estimates for the percentage low birthweight, 95 per cent confidence intervals were generated to account for the uncertainty arising from both the estimation of the parameters of the two normal distributions and from the imputation step.

2. Generation of preliminary country annual estimates and country consultations

All country input data points meeting inclusion criteria from both survey and administrative sources were used in the modelling process. Methods applied to generate annual country estimates varied by availability and type of input data, as described in step 3.

From October 2017 to January 2018, a country consultation process was undertaken which involved sending the preliminary modelled country estimates, accepted input data, and a description of methods to all UNICEF and WHO country offices. Country offices were asked to share the information with local counterparts responsible for WHA reporting and support their review and feedback. For the 54 countries reported as having "no estimate", all input data that had been reviewed were shared with a note regarding which inclusion criteria were not met. The focal point for the WHA Nutrition targets in the MoH of each Member State was also sent the same information directly with a request for review and feedback. The consultation process resulted in questions/comments from 113 countries and 341 new or updated data points from 55 countries.

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*   Mothers are asked to respond to whether the child's size was one of five pre-determined categories of very small, smaller than average, average, larger than average, or very large.

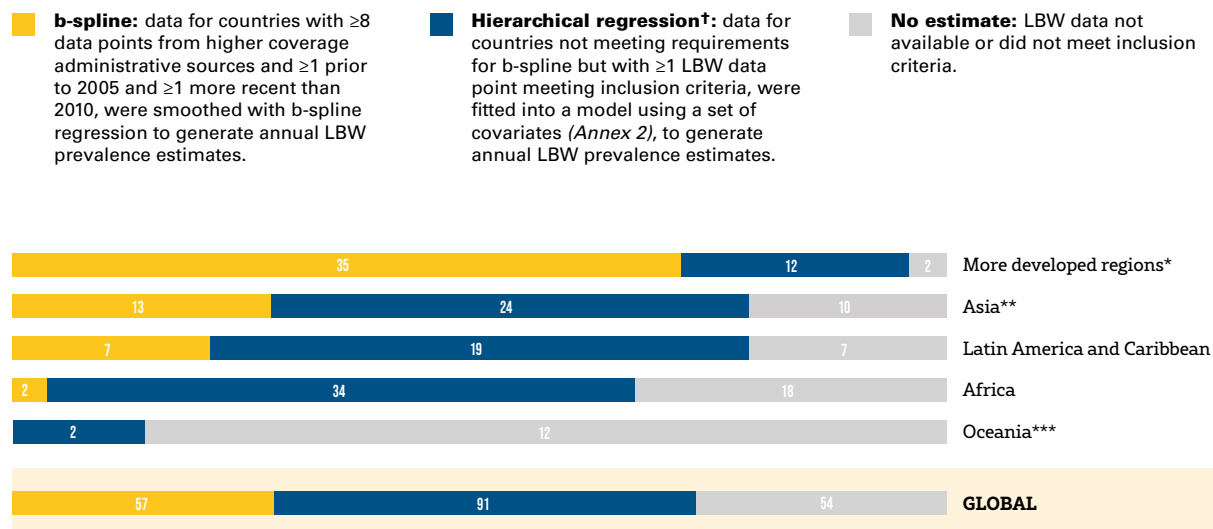# LOW BIRTHWEIGHT COULD NOT BE RELIABLY ESTIMATED FOR 54 COUNTRIES

b-spline: data for countries with ≥8 data points from higher coverage administrative sources and ≥1 prior to 2005 and ≥1 more recent than 2010, were smoothed with b-spline regression to generate annual LBW prevalence estimates.

Hierarchical regression†: data for countries not meeting requirements for b-spline but with ≥1 LBW data point meeting inclusion criteria, were fitted into a model using a set of covariates *(Annex 2)*, to generate annual LBW prevalence estimates.

No estimate: LBW data not available or did not meet inclusion criteria.

35	12	2	More developed regions*
13	24	10	Asia**
7	19	7	Latin America and Caribbean
2	34	18	Africa
	2	12	Oceania***
57	91	54	**GLOBAL**

Figure A.1: Number of countries by model approach used, by United Nations region
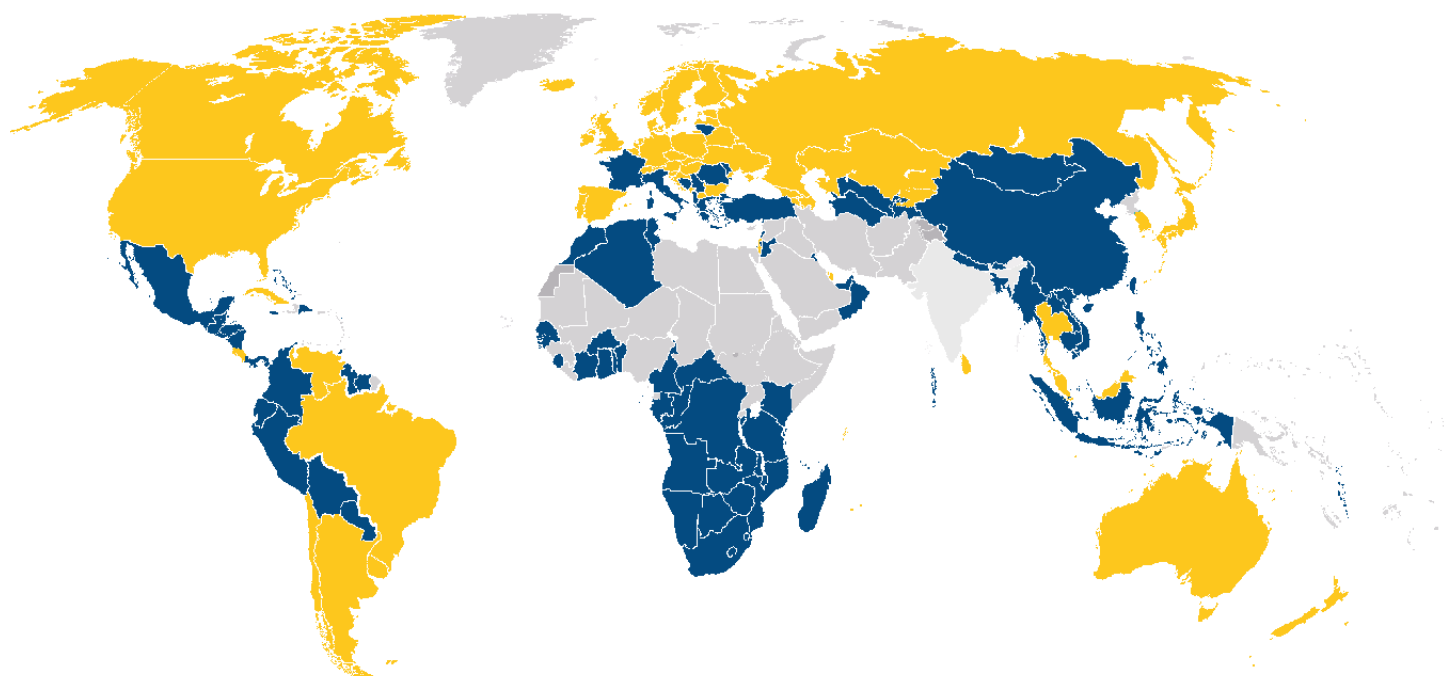
Figure A.2: Model approaches used for the 2000-2015 low birthweight time series, by country

Source: UNICEF-WHO Low birthweight estimates, 2019. Note: *More developed regions include Northern America, Europe, Japan and Australia and New Zealand. **Asia excludes Japan. ***Oceania excludes Australia and New Zealand. †This includes one country (India, shaded in light grey), for which the estimates were based on partial data for the most recent survey, therefore modeled estimates are not shown for the individual country. A version of this figure was originally published in *The Lancet Global Health* on 15 May 2019 under the title "National, regional, and worldwide estimates of low birthweight in 2015, with trends from 2000: a systematic analysis" and is available online at <http://dx.doi.org/10.1016/S2214-109X(18)30565-5>.

3. Generation of the UNICEF-WHO 2019 low birthweight annual country, regional and global database 2000–2015

The 341 new/updated data points meeting inclusion criteria were incorporated in the country input dataset yielding a final input dataset with 1,447 data points for 148 countries (1,218 administrative data points from 96 countries, with 1,026 high coverage and 192 moderate coverage; and 229 adjusted survey estimates from 86 countries). The models were re-run with the updated input data and the final country database with annual estimates from 2000–2015 developed. Annual national estimates were developed for all 195** countries which had covariate data (see the hierarchical regression section on p.32) but presented in the country database for only the 147 countries with at least one input data point meeting inclusion criteria***. The low birthweight estimates derived for the countries without any input data

meeting inclusion criteria were used solely for deriving global and regional estimates but were not presented as part of the country database.

Methods applied to generate annual country estimates varied by availability and type of input data *(Figure A.1 and Figure A.2)* as follows:

- **b-spline:** data for the **57 countries** with ≥8 data points from higher coverage administrative sources with ≥1 prior to 2005 and ≥1 more point more recent than 2010 were smoothed with b-spline regression to generate annual low birthweight estimates. A b-spline regression model was used to predict the standard error and calculate 95 per cent confidence intervals for the country-level low birthweight estimates. These low birthweight estimates follow very closely those included in the countries' own administrative reports.

** The estimates in this report are presented for various regional groupings of which the UNICEF regional grouping has the largest number of countries (n=202). Seven of the 202 countries did not have LBW input data or covariate data. It was therefore not possible to generate any estimates for these seven countries or include them in the regional and global estimates which are based on a total of 195 countries.

*** While India had input data meeting inclusion criteria, the country's modelled estimates are not presented as only partial data were used from the most recent survey.

INCLUSION CRITERIA FOR AVAILABLE DATA SOURCES

(i) National administrative data: These were reviewed for both data source coverage and facility birth rate, requiring a rate of ≥80 per cent for each to be included as estimates in the dataset. Low birthweight estimates in years where the source covered ≥90 per cent of UN estimated livebirths and had an associated facility birth rate of ≥90 per cent were labelled as high coverage; low birthweight estimates in years where the source covered ≥80 per cent of UN estimated livebirths and had a facility birth rate of ≥80 per

cent, but not fulfilling higher coverage criteria were labelled as moderate coverage. For the final database, after country consultations, a total of 1,218 administrative data points met the criteria (1,026 high coverage and 192 moderate coverage) to be included in the input dataset.

(ii) Household surveys: After the country consultation process, there were a total of 310 household surveys from 113 countries that: (a) were nationally representative; (b) had

publicly available raw data; (c) had birthweight data; and (d) had maternal perception of size at birth data (or in absence of size at birth data, had a birthweight for ≥99 per cent of births in the sample). A total of 236 of these 310 surveys met the coverage and quality inclusion criteria (Table 1) for at least partial data, but it was not possible to derive adjusted estimates for 7 of these surveys, thus the final dataset was comprised of 229 surveys.

Table 1: Coverage and quality criteria for household survey-based data

Indicator	Inclusion criteria	Surveys not meeting criteria
Percentage of births with a birthweight in the dataset	≥30 per cent	N=53
Total number of births with a birthweight in the dataset	≥200	N=4
No indication of severe heaping or implausible distribution among births with a birthweight in the dataset	a) ≤55 per cent of all birthweights fell on the three most frequent birthweights (i.e. if 3,000g, 3,500g and 2,500g were the three most frequent birthweights, when added together, they made up ≤55 per cent of all birthweights in the dataset);	N=7
	b) ≤10 per cent of all birthweights weighed ≥4,500g;	N=9
	c) ≤5 percent of birthweights on tail ends of 500g and 5,000g	N= 1

- **hierarchical regression:** data for the **91 countries** not meeting requirements for b-spline but with ≥1 LBW data point from any source meeting inclusion criteria were fitted into a model using covariates to generate annual LBW estimates, as well as uncertainty ranges, using a bootstrap approach. The model included (natural log) of neonatal mortality rate; the proportion of children underweight (weight for-age z score below minus two standard deviations from median weight for age of reference population); data type (high coverage administrative, moderate coverage administrative, household survey); UN region (e.g., Southern Asia, Caribbean); and a country-specific random effect. These LBW estimates may vary substantially from estimates reported by countries in administrative and survey reports.

- **no estimate:** the **54 countries** for which LBW input data were not available and/or did not meet inclusion criteria are indicated in the database as "no estimate".

Global estimates were derived by summing the estimated number of live births weighing less than 2,500g for the 195 countries[****] in the United Nations regional grouping for each year and dividing by all live births in each year in those 195 countries. Regional estimates were similarly derived, based on countries in each regional grouping. To obtain the global and regional level estimates of uncertainty, 1,000 low birthweight point estimates were made for each country for each year using either b-spline (by randomly sampling from a normal distribution plotted using the calculated standard error) or hierarchical regression approach (using a bootstrap approach). The country low birthweight estimates for each of the 1,000 samples were summed at worldwide or regional level and the 2.5th and 97.5th centiles of the resulting distributions were used as the confidence intervals. Because about half of the modelled countries had a country-specific effect generated at random for each bootstrap prediction, some of which were positive and others negative, the relative uncertainty at the regional and worldwide level tends to be less than that at the individual country level.
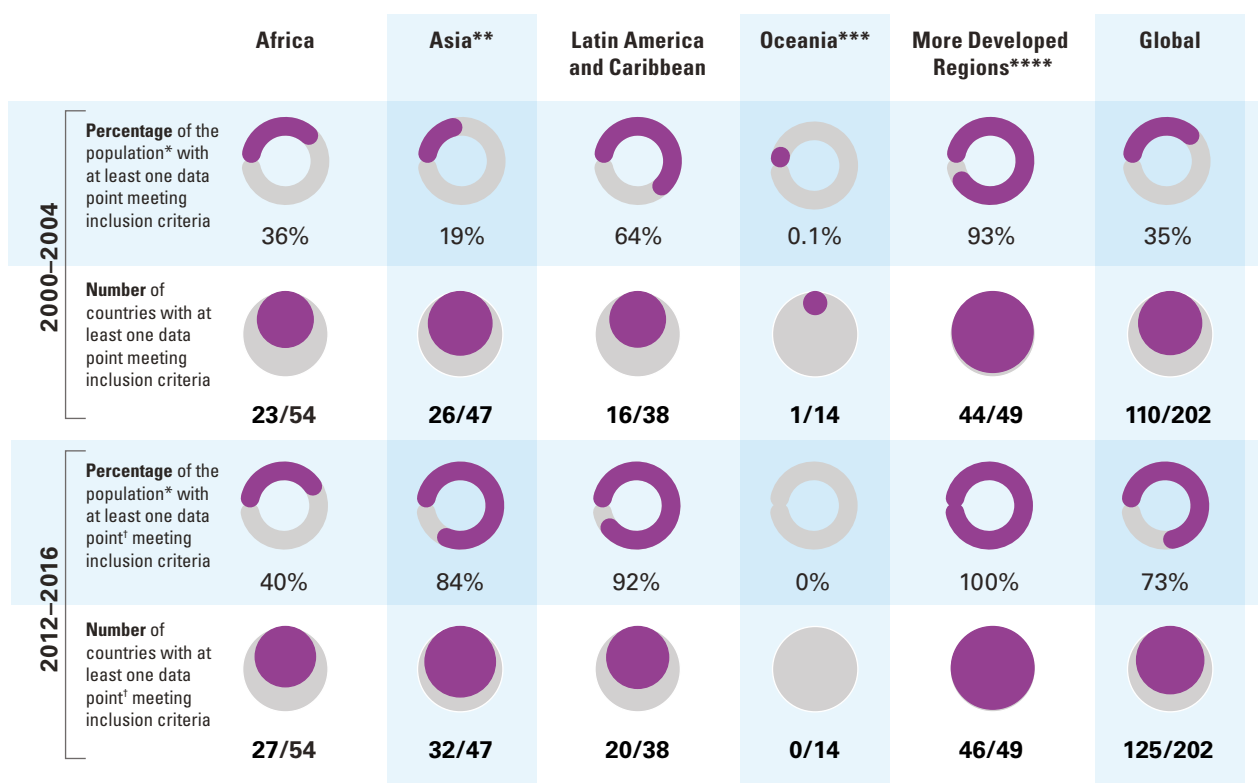
Next steps

UNICEF and WHO will continue working with countries to improve low birthweight data and the methods used to generate low birthweight estimates, together with governments and partners such as London School of Hygiene and Tropical Medicine and Johns Hopkins University.

[****] The estimates in this report are presented for various regional groupings of which the UNICEF regional grouping has the largest number of countries (n=202). Seven of the 202 countries did not have LBW input data or covariate data. It was therefore not possible to generate any estimates for these seven countries or include them in the regional and global estimates which are based on a total of 195 countries.

Population coverage

		Africa	Asia**	Latin America and Caribbean	Oceania***	More Developed Regions****	Global
2000–2004	**Percentage** of the population* with at least one data point meeting inclusion criteria	36%	19%	64%	0.1%	93%	35%
	Number of countries with at least one data point meeting inclusion criteria	23/54	26/47	16/38	1/14	44/49	110/202
2012–2016	**Percentage** of the population* with at least one data point† meeting inclusion criteria	40%	84%	92%	0%	100%	73%
	Number of countries with at least one data point† meeting inclusion criteria	27/54	32/47	20/38	0/14	46/49	125/202

*Population coverage was calculated as: the sum of country five-year average total births for which at least one data point met inclusion criteria, divided by, the total of country five-year average total births for all countries in the region. **Asia excludes Japan. ***Oceania excludes Australia and New Zealand. ****More developed regions include Northern America, Europe, Japan and Australia and New Zealand. †This includes one country (India), for which partial data were used from the data point meeting inclusion criteria.

Endnotes

Introduction

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The way forward

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Annex 2

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United Nations Regional Classification
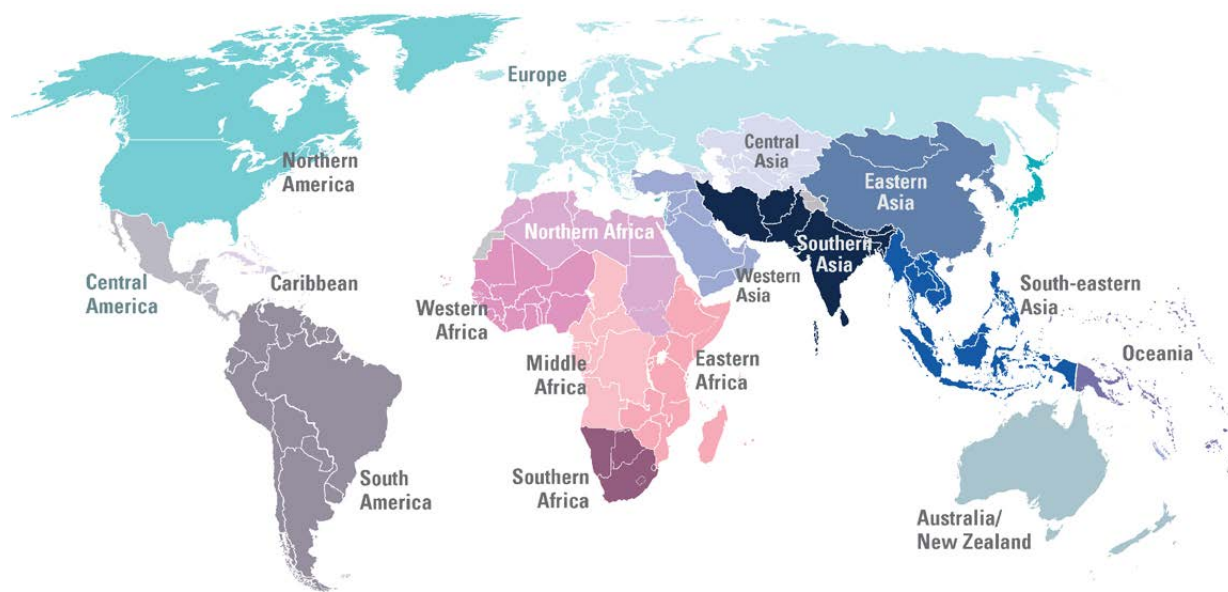
LATIN AMERICA AND THE CARIBBEAN

Caribbean: Antigua and Barbuda; Bahamas; Barbados; Cuba; Dominica; Dominican Republic; Grenada; Haiti; Jamaica; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Trinidad and Tobago

Central America: Belize; Costa Rica; El Salvador; Guatemala; Honduras; Mexico; Nicaragua; Panama

South America: Argentina; Bolivia (Plurinational State of); Brazil; Chile; Colombia; Ecuador; Guyana; Paraguay; Peru; Suriname; Uruguay; Venezuela (Bolivarian Republic of)

AFRICA

Eastern Africa: Burundi; Comoros; Djibouti; Eritrea; Ethiopia; Kenya; Madagascar; Malawi; Mauritius; Mozambique; Rwanda; Seychelles; Somalia; South Sudan; Uganda; United Republic of Tanzania; Zambia; Zimbabwe

Middle Africa: Angola; Cameroon; Central African Republic; Chad; Congo; Democratic Republic of the Congo; Equatorial Guinea; Gabon; Sao Tome and Principe

Northern Africa: Algeria; Egypt; Libya; Morocco; Sudan; Tunisia

Southern Africa: Botswana; Eswatini; Lesotho; Namibia; South Africa

Western Africa: Benin; Burkina Faso; Cabo Verde; Côte d'Ivoire; Gambia; Ghana; Guinea; Guinea-Bissau; Liberia; Mali; Mauritania; Niger; Nigeria; Senegal; Sierra Leone; Togo

ASIA

Central Asia: Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan

Eastern Asia: China; Democratic People's Republic of Korea; Mongolia; Republic of Korea

South-eastern Asia: Brunei Darussalam; Cambodia; Indonesia; Lao People's Democratic Republic; Malaysia; Myanmar; Philippines; Singapore; Thailand; Timor-Leste; Viet Nam

Southern Asia: Afghanistan; Bangladesh; Bhutan; India; Iran (Islamic Republic of); Maldives; Nepal; Pakistan; Sri Lanka

Western Asia: Armenia; Azerbaijan; Bahrain; Cyprus; Georgia; Iraq; Israel; Jordan; Kuwait; Lebanon; Oman; Qatar; Saudi Arabia; State of Palestine; Syrian Arab Republic; Turkey; United Arab Emirates; Yemen

OCEANIA

Cook Islands; Fiji; Kiribati; Marshall Islands; Micronesia (Federated States of); Nauru; Niue; Palau; Papua New Guinea; Samoa; Solomon Islands; Tonga; Tuvalu; Vanuatu

MORE DEVELOPED REGIONS

Australia; New Zealand

Europe: Albania; Andorra; Austria; Belarus; Belgium; Bosnia and Herzegovina; Bulgaria; Croatia; Czechia; Denmark; Estonia; Finland; France; Germany; Greece; Holy See*; Hungary; Iceland; Ireland; Italy; Latvia; Liechtenstein*; Lithuania; Luxembourg; Malta; Monaco; Montenegro; Netherlands; Norway; Poland; Portugal; Republic of Moldova; Romania; Russian Federation; San Marino; Serbia; Slovakia; Slovenia; Spain; Sweden; Switzerland; North Macedonia; Ukraine; United Kingdom

Japan

Northern America; Canada; United States

NON-CLASSIFIED

Anguilla; British Virigin Islands; Montserrat; Tokelau; Turks and Caicos Islands

Notes:
*Holy See and Liechtenstein as well as the ‡ five countries which are not classified into a United Nations region, were not included among the countries used to generate the regional or global estimates as they did not have low birthweight input data and also did not have covariate data to generate modelled low birthweight estimates.
‡These 5 countries are not classified to any United Nations region or sub-region but form part of the UNICEF regional classification and were therefore included here as they are included in Annex 1.

data.unicef.org/nutrition I www.who.int/nutrition