# FROM THE FIRST HOUR OF LIFE

Making the case for improved infant and young child feeding everywhere

**PART I: Focus on breastfeeding**

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**PART I**
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# Acknowledgements

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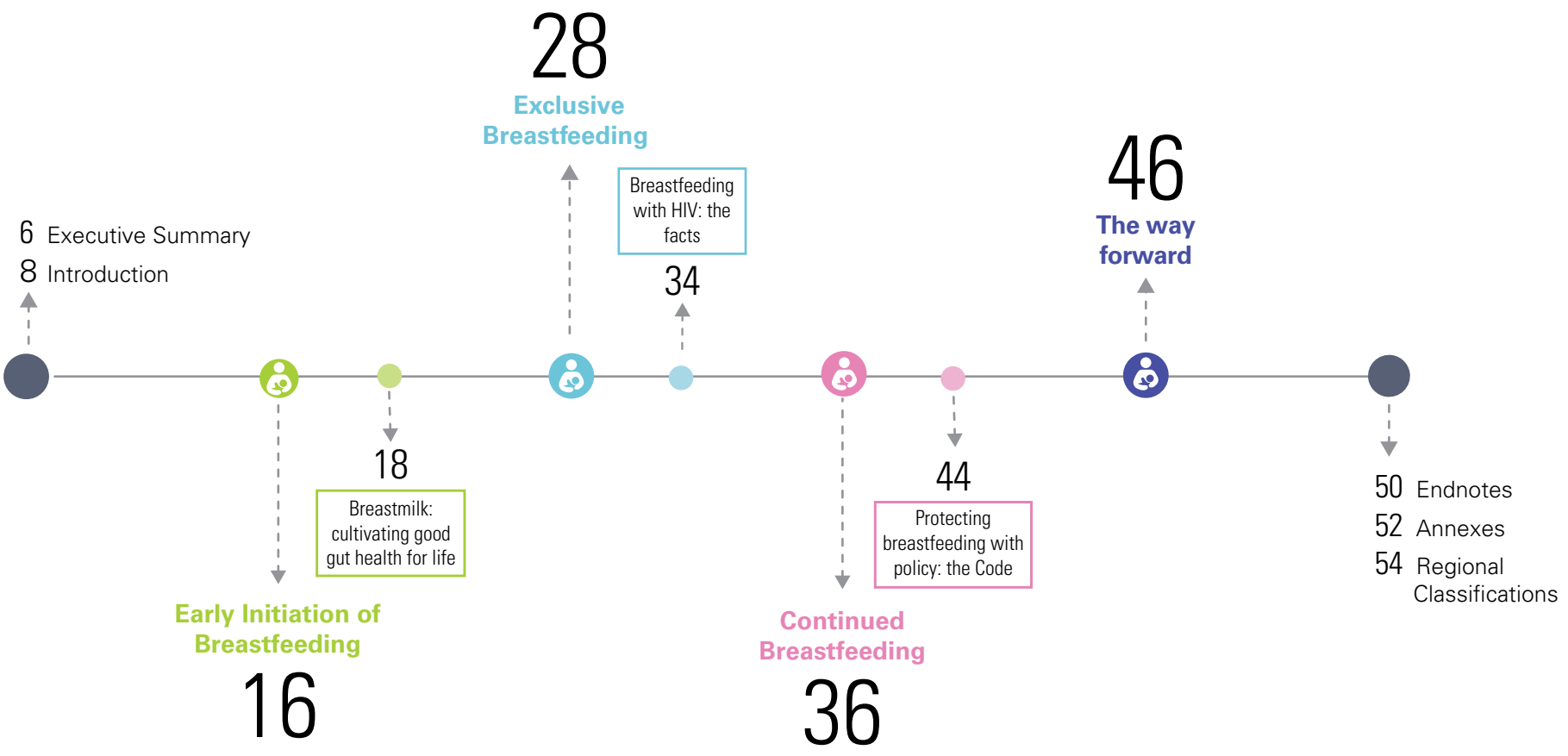


# EXECUTIVE SUMMARY

Breastfeeding is not a one-woman job. Women who choose to breastfeed need support from their governments, health systems, workplaces, communities and families to make it work.

While the evidence on the power of breastfeeding for lifelong health and prosperity is stronger than ever, there is much work to be done in improving breastfeeding rates worldwide. Part I of this global report, *From the first hour of life: Making the case for improved infant and young child feeding everywhere,* paints a troubling picture about the state of breastfeeding practices around the world.

This report reviews the most recent evidence on breastfeeding and provides updated global and regional estimates on early initiation of breastfeeding, exclusive breastfeeding and continued breastfeeding. The report concludes with recommendations to guide policy action on breastfeeding at the national level.

**The first hour of life:** The early initiation of breastfeeding – putting babies to the breast within the first hour of life – safeguards infants from dying during the most vulnerable time in their lives. However, less than half of all newborns are put to the breast within an hour of birth. That leaves 77 million newborns waiting too long for this first critical contact with their mother outside of the womb. Progress to improve early initiation rates has been slow over the past 15 years, with global rates increasing by just 14 percentage points overall.

In a subset of countries studied, nearly two out of five breastfed newborns were found to receive foods or liquids other than breastmilk in the earliest days of life. This is concerning because feeding newborns anything other than breastmilk has the potential to delay initiation of breastfeeding – and the evidence is clear that the longer the delay, the greater the risk of death.

Globally, the majority of births are now delivered with the help of a skilled attendant. Despite the potential of skilled birth attendants to support mothers in initiating breastfeeding immediately after birth, in most regions studied, early initiation was not facilitated by the presence of a doctor, nurse or midwife.

**From birth to six months:** Exclusive breastfeeding – feeding infants only breastmilk for the first six months of life – is the safest and healthiest option for children everywhere. Yet in every region of the world, rates of exclusive breastfeeding decline steadily from birth to 5 months of age.

Globally, just over 40 per cent – or two out of five – of the world's infants under 6 months of age are exclusively breastfed, and there has been little progress over the past 15 years.

Five out of seven regions with trend data have current rates around 30 per cent, and all of them have improved very little, if at all, in more than a decade.

**From 6 months to age 2 and beyond:** Continued breastfeeding – which covers breastfeeding during the period between 6 months and 2 years of age or beyond – improves cognitive ability, translating into improved school performance, better long-term earnings and enhanced productivity. Globally, less than half of all children are still being breastfed at 2 years, and this rate has remained relatively unchanged since 2000. Continued breastfeeding rates drop from 74 per cent at 1 year to 46 per cent at 2 years. In nearly all regions, continued breastfeeding rates are also highest among women from the poorest households.

Government leadership is also needed to pass national laws and policies that reflect the collective responsibility to protect, promote, and support breastfeeding.

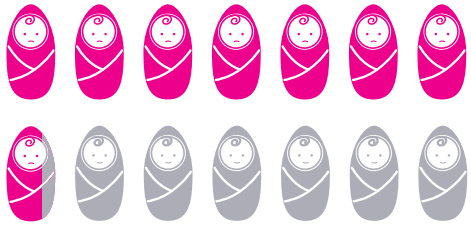
We must recognize that building breastfeeding-friendly policies, health systems, workplaces and communities is everyone's responsibility. If we do so we can create a better world for future generations.

# Too few infants and young children are benefiting from appropriate breastfeeding practices.

Of the 140 million live births in 2015,

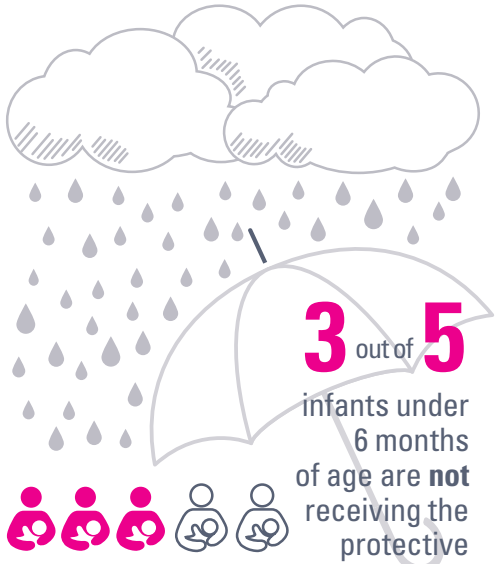
**77 million**

newborns had to wait **too long** to be put to the breast.



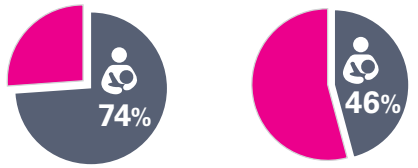
Only 45 per cent of newborns were put to the breast within the first hour of life.

*= 10 million newborns*



**3** out of **5** infants under 6 months of age are **not** receiving the protective benefits of **exclusive breastfeeding**

Breastfeeding rates **decrease** by about **one third** between 12 and 23 months.




**12-15** months

**20-23** months

The per cent of children breastfed at 1 year (12-15 months) and 2 years (20-23 months)

**We must change the story and make sure that all women who choose to breastfeed have the support they need from their governments, health systems, workplaces, communities and families.**

A woman breastfeeds her newborn at the KBC Zvezdara Maternity Hospital in Belgrade.
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# INTRODUCTION

**What and how children are fed – particularly in the first two years of life – is critical to their health, development and survival**

In every country in the world, parents and caregivers invest time, money, and care into the foods they provide for their children, but despite their best efforts, they face immense challenges. While the past decade has seen global progress in reducing chronic malnutrition, stunting still affects 159 million children globally. At the same time, 41 million children are overweight or obese – 10 million more than there were two decades ago.[1] Families the world over are clearly facing complex economic, political, social and cultural barriers to providing children with adequate quantities of safe, nutritious and age-appropriate foods.

Food and feeding practices from birth to age 2 have a profound impact on the rest of a child's life. Good nutrition helps children exercise their rights to grow, learn, develop, participate and become productive members of their communities. As children thrive, nations prosper: good nutrition drives human capital, lifts families out of poverty and paves the way for a more sustainable future.

We know that in rich and poor countries alike, breastfeeding saves lives and gives children the healthiest start.[2] While the evidence on the power of breastfeeding for lifelong health and prosperity is stronger than ever, too few children are benefiting.

The transition from exclusive breastfeeding to consumption of solid, semi-solid and soft foods in addition to breastmilk at 6 months of age is also critical to ensure that infants are receiving all of the nutrients they need to grow and develop. Yet many children are either introduced to these complementary foods too early or too late for optimal health and development. Most children are also not fed an adequate and diverse diet, leaving them without the vital nutrients required to reach their full potential.

With the adoption of the 2030 Agenda for Sustainable Development, improving infant and young child feeding practices has never been more urgent. Good nutrition in early life is central to achieving Sustainable Development Goal (SDG) 2 on ending hunger, achieving food security and improving nutrition – and will also set countries on the path to achieving the SDG goals of improving health, ending poverty, promoting economic growth, reducing inequalities, ensuring quality education, promoting gender equality and ensuring sustainable consumption. Government leadership and investments, as well as contributions at all levels of society, will be critical in driving these achievements.

Action to galvanize investments in breastfeeding is gaining momentum under the leadership of the Global Breastfeeding Advocacy Initiative, a partnership of 18 global organizations, led by UNICEF and WHO. There have also been renewed global efforts to improve complementary feeding practices, which culminated in the 'First Foods' global meeting, held in India in 2015. The conference resulted in a set of recommendations to countries for accelerating progress on complementary feeding.

This report, *From the First Hour of Life: Making the case for improved infant and young child feeding everywhere,* provides a global status update on infant and young child feeding practices and puts forth recommendations for improving them.

The first part of this two-part report focuses on breastfeeding practices. It reviews the evolving evidence base, presents the most recent estimates on key breastfeeding indicators, and highlights what needs to be done to accelerate progress. Part two of the report is on complementary feeding and is forthcoming. This part will review the evidence base, present current estimates and trends where possible, and provide recommendations to guide policy action in this area.

# THE IMPORTANCE OF BREASTFEEDING

We know that in rich and poor countries alike, breastfeeding saves lives and gives children the healthiest start.

## What are the recommended breastfeeding practices?

The WHO and UNICEF Global Strategy for Infant and Young Child Feeding outlines three recommended breastfeeding practices:

- Early initiation of breastfeeding – place newborns skin-to-skin with their mother immediately after birth, and support mothers to initiate breastfeeding within the baby's first hour of life.
- Exclusive breastfeeding – provide only breastmilk to infants from birth until 6 months of age, with no other food or liquids (including water).
- Continued breastfeeding – breastfeeding until age 2 or longer, in addition to adequate and safe solid, semi-solid or soft foods (also called complementary foods).

## What are the direct impacts of breastfeeding?

Breastmilk is safe: it is the right temperature, requires no preparation, and is available even in environments with poor sanitation and unsafe drinking water.

Immediate skin-to skin contact and starting breastfeeding early keeps a baby warm, builds his or her immune system, promotes bonding, boosts a mother's milk supply and increases the chances that she will be able to continue exclusive breastfeeding.

Breastmilk is more than just food for babies – it is also a potent medicine for disease prevention that is tailored to the needs of each child. The 'first milk' – or colostrum – is rich in antibodies to protect babies from disease and death.

Breastfeeding keeps infants safe from unhygienic environments and contaminants in foods that can cause diarrhoea and lead to nutrient loss and undernutrition. This benefit is particularly important in humanitarian settings, were these risks may be exacerbated.

Breastfed babies are less susceptible to ear infections, diarrhoea, pneumonia and other childhood illnesses. Nearly half of all diarrhoea episodes and one third of all respiratory infections could be prevented by improving breastfeeding practices in low- and middle-income countries.[3] When a mother falls ill, she produces antibodies in her breastmilk to fight the infection, to which her baby is also exposed and benefits from. This immunological communication between mother and baby makes breastmilk 'the most personalized form of medicine that any of us will receive in our lifetime'. It means that a mother's body can write a prescription for illness that is unique to her baby's needs and environment.[2]

Continued breastfeeding up to age 2 or longer can provide babies with nutrients that are unavailable in settings with limited access to a diverse range of complementary foods.[4]

## What are the medium- and long-term impacts?

In rich and poor countries alike, long periods of breastfeeding are associated with higher intelligence scores – and there is evidence that this translates into improved academic performance and increased long-term earnings.

There is growing evidence that breastfeeding may also reduce the incidence of overweight, obesity and chronic diseases like diabetes later in life.[2]

Breastfeeding mothers also have a lower risk of developing breast and ovarian cancers. Improving breastfeeding practices could prevent 20,000 maternal deaths due to breast cancer every year.[2]

Breastfeeding can also delay ovulation, helping women to better space their pregnancies.[5]

Low rates of breastfeeding are responsible for losses of more than $230 billion annually in high-income countries, and $70 billion annually in low- and middle-income countries.[6]

The case for breastfeeding is solid and compelling. It is a high-impact, cost-effective solution for saving children's lives. Breastfeeding is one of the smartest investments to boost human capital, stimulate economic growth and give every child the same opportunity to thrive.

If scaled up to nearly universal levels, breastfeeding could save more than 800,000 child lives and add more than $300 billion to the global economy each year.[2, 6] From reduced disease incidence to economic returns, breastfeeding stimulates development gains at all levels and will be a key driver in achieving the SDGs.

As children thrive, nations prosper: good nutrition drives human captial, lifts families out of poverty and paves the way for a more sustainable future.

## Introduction

# BETTER SUPPORT FOR BREASTFEEDING

### What does breastfeeding support look like?

While breastfeeding is a personal relationship between mother and baby, it is not a one-woman job. It requires a wider network of support from families, communities, workplaces and the health system, as well as government leadership, to really make it work.

We must recognize that building breastfeeding-friendly policies, health systems, workplaces and communities is everyone's responsibility.[6]

While breastmilk is nature's perfect food for babies, the act of breastfeeding does not always come naturally. For breastfeeding to succeed, women need access to skilled support and guidance. Skilled support empowers women and builds confidence that translates into better breastfeeding rates.

Breastfeeding may be cost-effective, but it is not free; it requires a significant investment of time and energy on the part of mothers. Children, especially newborns, feed around the clock and do not wait for jobs, household chores or childcare responsibilities. Families, communities and workplaces each have a role to play in affording women the time and space necessary to breastfeed.

**Government** – leadership is needed to pass and enforce national laws and policies that reflect the collective responsibility to protect, promote and support breastfeeding. By enacting legislation to restrict the marketing of breastmilk substitutes – and monitoring its compliance – governments can act against unethical business practices and send the message that breastfeeding matters. Enacting legislation on paid maternity leave and breastfeeding breaks in line with ILO Convention 183 ensures that breastfeeding and work are not mutually exclusive. In addition, adequate funding should be allocated for the implementation of interventions that support breastfeeding.

**Health-care system**– most mothers will tell you that breastfeeding can be a challenging skill to learn; health-care workers skilled in lactation counselling are needed to provide guidance and support to new or struggling mothers. Hospitals should also protect, promote and support breastfeeding – for example, by strengthening the Ten Steps of the Baby-Friendly Hospital Initiative (BFHI).

**Workplace** – paid and unpaid work is a common obstacle to breastfeeding; adequate maternity or parental leave, childcare support, nursing breaks and designated spaces to express milk are vital supports for working mothers.

**Community** – communities can be welcoming or hostile places for breastfeeding. Everyone wins when breastfeeding is normalized and women feel comfortable nursing their babies anyplace and anytime. Strengthened linkages between communities and health facilities may also encourage community networks to support breastfeeding.

**Family** – fathers, grandparents and other relatives often influence the way babies are fed; mothers are better able to breastfeed when they have the support of their families though positive encouragement and the sharing of household responsibilities.

# Breastfeeding is not a one-woman job

– it requires government leadership and support from families, communities, workplaces and the health system to really make it work.

**Introduction**

# A GLOBAL OVERVIEW OF BREASTFEEDING PRACTICES

If the world was issued a global breastfeeding scorecard, it would receive a failing grade.

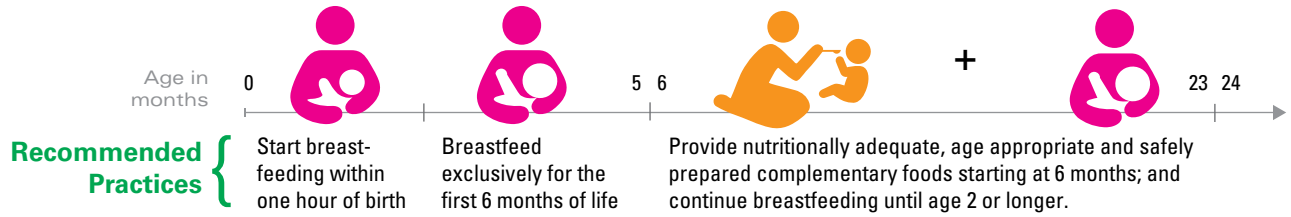
If the world was issued a global breastfeeding scorecard, it would receive a failing grade. While most children in the world receive some breastmilk in their diets between the first hour of life and age 2, too few are fed in line with global recommendations. There is a pressing need to improve breastfeeding rates across all regions to give children the best chance to survive and grow.

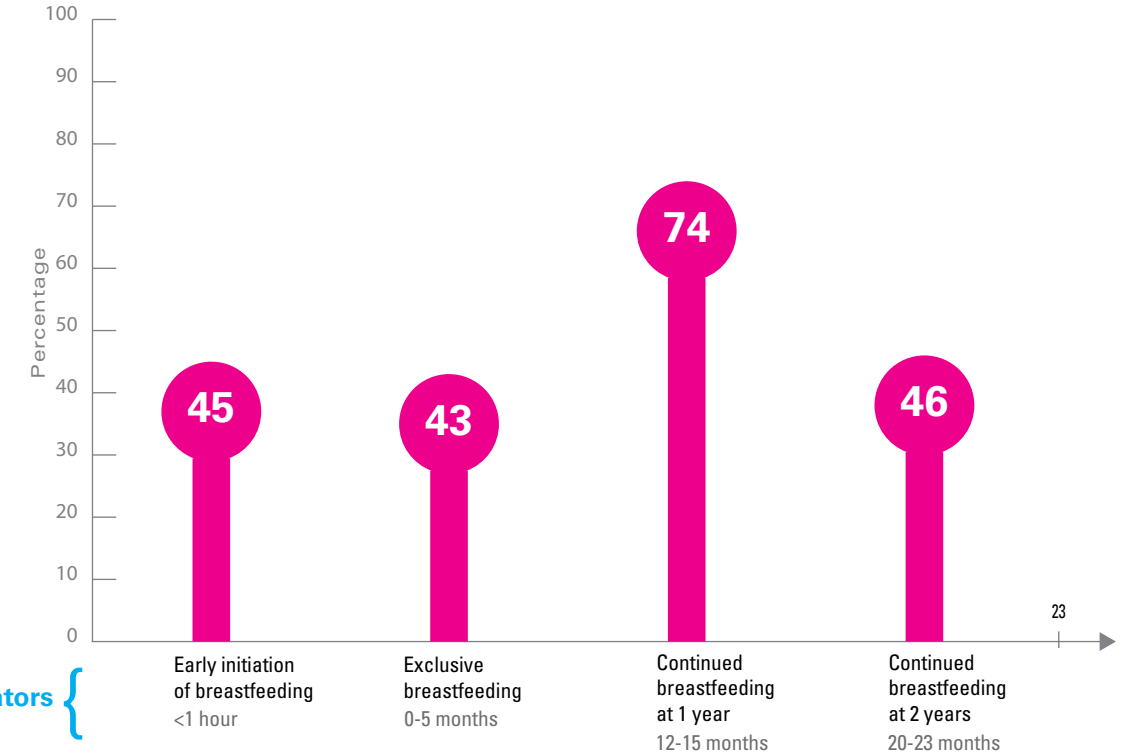
Despite the life-saving power of breastfeeding, fewer than half of newborns are put to the breast within the first hour after birth and breastfed exclusively for the first six months of life. While almost three out of four children receive some breastmilk past one year, less than half are breastfed until the recommended two years or longer.

Global progress to improve breastfeeding has been stubbornly slow for the past decade. But the good news is that we already know many of the solutions needed to accelerate progress on these indicators. With the right commitment and investments from governments, the evidence on what works and better knowledge of the current situation, there is great potential to create a better and more equitable future for all children.

The following sections review the most recent evidence on early initiation of breastfeeding, exclusive breastfeeding and continued breastfeeding. Each section provides updated global and regional estimates and trends, where available, as well as disaggregated analyses.

# Too few children are reaping the benefits breastfeeding provides




Percentage of children: put to the breast within one hour of birth, exclusively breastfed (0-5 months); introduced to solids (6-8 months), with a minimum meal frequency, minimum diet diversity and minimum acceptable diet (6-23 months) and continued breastfeeding at 1 year (12-15 months) and 2 years (20-23 months), 2015*.

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources. Data included in these global averages are the most recent for each country between 2010-2015 (*exception: China, 2008).
**While >50% of the global population coverage was met, almost all of the data for these indicators are from low and lower middle income countries.

A midwife assists a woman who is breastfeeding her baby 30 minutes after the baby's birth, at an integrated community health centre in Maradi Commune II, Maradi Department. UNICEF supports the health centre with supplies. © UNICEF/UNI109441/ Pirozzi

# EARLY INITIATION OF BREASTFEEDING

Of the 140 million live births in 2015,

**77 million**

newborns had to wait **too long** to be put to the breast.

Only 45 per cent of newborns were put to the breast within the first hour of life.

*(Each silhouette represents 10 million newborns)*

## Early initiation of breastfeeding

# FOR NEWBORNS AROUND THE WORLD, EVERY MINUTE COUNTS

### Why does early initiation matter?

When it comes to breastfeeding, timing can mean the difference between life and death. Early initiation of breastfeeding – putting newborns to the breast within the first hour of life – safeguards infants from dying during the most vulnerable time in their lives. New evidence indicates that when compared with newborns who were put to the breast within an hour of birth, the risk of dying in the first 28 days of life is 41 per cent higher for those who initiated 2–23 hours after birth, and 79 per cent higher for those who initiated one day or longer after birth.[1] We have known for some time that early initiation helps to establish exclusive breastfeeding – a life-saving practice. These new findings also confirm that getting an early start to breastfeeding boosts child survival in its own right and that the protective benefit extends well beyond the first month, until the age of 6 months.[1]

Colostrum, the first milk, is rich in antibodies and gives newborns an immunity boost, while their own immune systems are still developing. The composition of breastmilk is unique to each infant-mother pair, made specifically to address the child's needs at any moment in time *(see box, below)*.

### Breastmilk – cultivating good gut health for life

Breastfeeding is a unique and powerful medium of communication between mother and baby. Mothers transmit elements of their microbiota and microbiome – the myriad of bacteria that live in the human body as well as their genetic material – to their children through breastmilk. These 'good bacteria' live in the gut and help fight disease, digest food and regulate our immune systems. They are genetically specific to each woman's body and connected to the environment in which she lives.[4]

Breastmilk provides these good bacteria with food, in the form of hundreds of complex chains of sugars that are only found in human milk. These sugars not only feed healthy bacteria, but they also starve dangerous bacteria and prevent them from growing. This process helps to programme the healthy development of the infant's gut microbiome for life.[5]

Through the dynamic, biological process of breastfeeding, infants can tell their mothers exactly what they need at a specific moment in time. As infants breastfeed, the immune composition of breastmilk adjusts in response to the properties of their saliva. If pathogens are detected, the mother's body may produce antibodies to fight them. In this way, breastmilk is more than just food – it is also a potent medicine, tailored exactly to a child's needs by his or her mother's body.

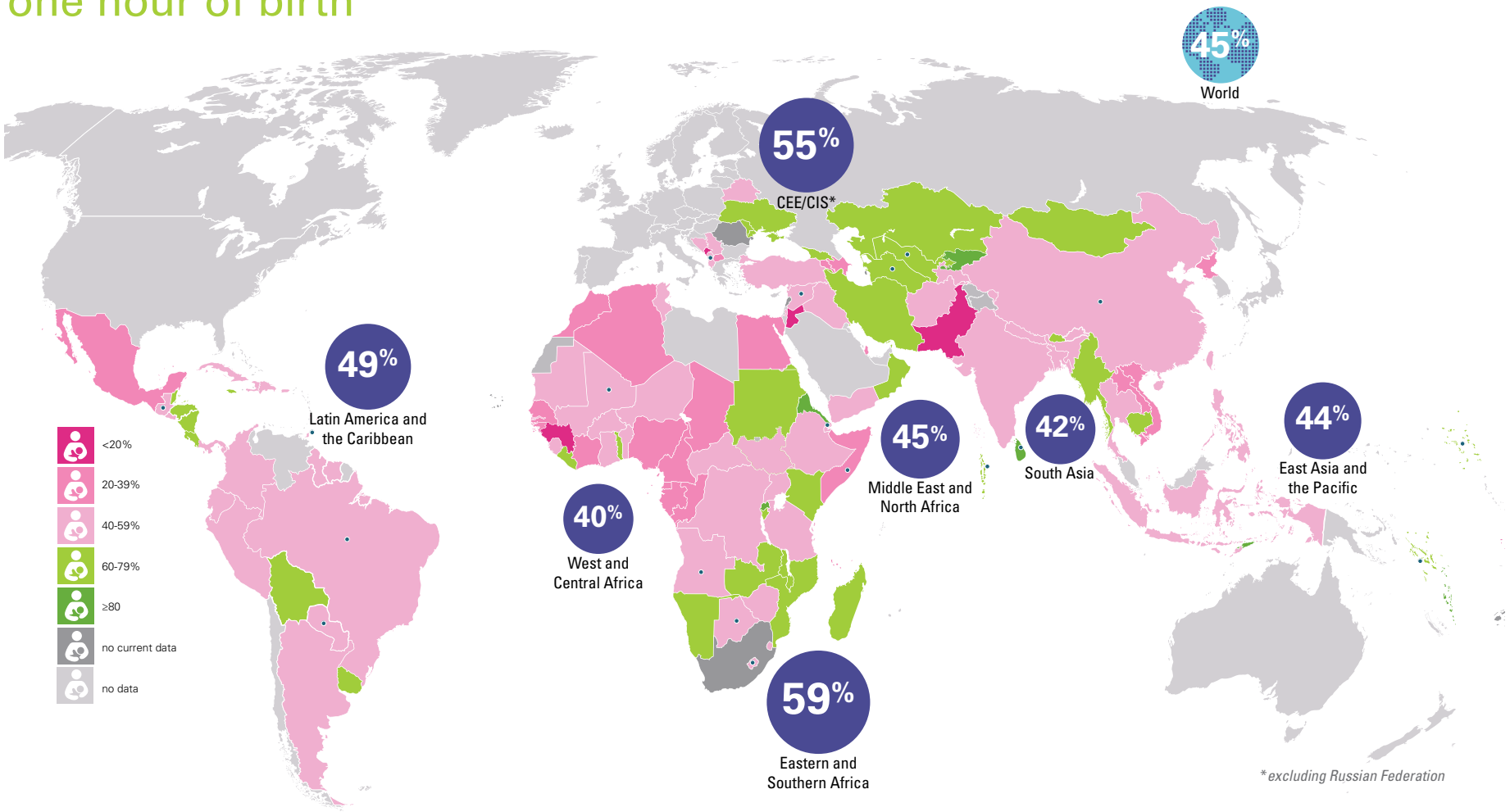
In the earliest days of life, components of breastmilk can positively influence the way some genes are expressed, or 'turned on' – with effects that last a lifetime.[6] There is evidence, for example, that breastmilk can help to counteract an infant's genetic predisposition for obesity and other chronic diseases.[7]

Placing a newborn on the mother's bare chest – known as skin-to-skin contact – is a key component of early initiation. Skin-to-skin contact helps reduce mortality by, among other things, regulating a newborn's temperature, heart rate and breathing, while also facilitating breastfeeding. Mothers practicing early skin-to-skin contact with their newborns are more likely to breastfeed in the first 1 to 4 months of their child's life and to continue for longer durations.[2] In some countries, the rise in Caesarean deliveries has reduced this crucial practice and delayed breastfeeding initiation; however, with the right support, even most newborns delivered by Caesarean section can be put to the breast within the first hour of life.[3]

### What do the numbers tell us?

Globally, less than half of all newborns are put to the breast within an hour of birth. That leaves 77 million newborns waiting too long for this first critical contact with their mother outside of the womb. Five regions have early initiation rates below 50 per cent. The highest rates of early initiation are in Eastern and Southern Africa. However, even in this region, which has one of the highest rates of infant mortality in the world, just three out of five newborns are reaping the benefits of early initiation on survival. Due to the lack of available data in the majority of high-income countries, we know very little about early initiation in these settings.

# Globally, less than half of all newborns are put to the breast within one hour of birth




Percentage of newborns put to the breast within one hour of birth, by country and region, 2015

**Source**: UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources, 2010-2016 (• denotes countries with older data between 2005-2009; data from these countries are not included in the regional aggregates except for China (2008) which is used for the East Asia and the Pacific and World averages). Countries shaded in dark grey have estimates from 2004 or earlier and are thus represented as having "no current data"; these countries are not included in the regional aggregates. *CEE/CIS does not include Russian Federation. **Note**: These maps are stylized and not to scale and do not reflect a position by UNICEF 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 the Abyei area has not yet been determined.

## Trends in the early initiation of breastfeeding

# A CALL TO INTENSIFY OUR EFFORTS

### Are we making progress?

Progress to improve early initiation rates has been slow over the past 15 years, with global rates increasing by just 14 percentage points overall. The trend is similar in Eastern and Southern Africa and Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS), which have each experienced moderate increases of about 10 percentage points since 2000. Most troubling are the situations in East Asia and the Pacific and West and Central Africa, where there has been no improvement at all in the past 15 years.

The exception to these trends is South Asia, which has nearly tripled its rates of early initiation, from 16 per cent in 2000 to 45 per cent in 2015. While this progress is encouraging, there is a need to further boost early initiation rates, which still sit below 50 per cent in the region, leaving 21 million newborns waiting too long for the health benefits and comfort provided by breastfeeding.

### Why should we act now?

While under-5 mortality has declined substantially over the past 15 years, neonatal mortality – the probability of dying in the first 28 days of life – has not gone down to the same degree. In 2015, neonatal deaths accounted for 45 per cent of all under-5 deaths.[8,9]

In order to support the achievement of the 2030 SDG target to end preventable child deaths, and reduce neonatal mortality to at least as low as 12 per 1,000 live births, we need to ensure that all newborns are put to the breast within the first hour of life.

The Every Newborn Action Plan[10] calls for the early initiation of breastfeeding in its road map and joint action platform for the reduction of preventable neonatal mortality. All regions must do more to ensure that every newborn benefits from this simple and effective practice.

All regions must do more to ensure that every newborn benefits from this simple and effective practice.

# Several regions have made progress, but globally, more than half of newborns are left waiting too long


Trends in percentage of newborns put to the breast within one hour of birth, by region, around 2000 and around 2015

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Note:** Analysis is based on a subset of 48 countries with comparable trend data covering 55 per cent of the global population (excluding China and Russian Federation) for around 2000 (1997-2003) and around 2015 (2010-2016). Rates for 2015 may differ from current rates presented elsewhere as trends are based on a subset of countries with baseline data. Regional estimates are presented only where adequate population coverage (≥50 per cent) is met. *To meet adequate population coverage, East Asia and the Pacific does not include China and CEE/CIS does not include Russian Federation. **Other refers to mainly high-income countries not included within UNICEF programme regions.

## Feeding in the first days of life

# THE MYTH THAT NEWBORNS NEED MORE THAN BREASTMILK

### What else are breastfed newborns being fed in the first few days – and why does it matter?

It is common in many parts of the world to give newborns foods or liquids other than breastmilk in the first few days of life. This is linked to traditions, cultural norms, family practices, and health system policies and procedures – many of which are not grounded in evidence. In some places, traditional beliefs hold that colostrum is dangerous and the precious substance is discarded; in other settings, cultural practices involve feeding newborns tea, butter, sugar water, honey or animal milk before they are put to the breast.[11] Outdated practices of some maternity wards involve separating newborns from their mothers and giving them liquids such as sugar water or infant formula while their mothers rest.

Producers and distributors of breastmilk substitutes have invested enormous resources in changing the perception of infant formula from that of a specialized food, vital to infants who cannot breastfeed, to an appropriate substitute for any baby.[12] Yet infant formula, as well as other liquids or foods, can permanently alter the profile of good bacteria in the child's gut.

There is also the risk of contamination from these non-breastmilk feedings, particularly those containing water or honey, which can expose vulnerable newborns to life-threatening pathogens. In contrast, breastmilk is safe and contains a multitude of vitamins, minerals and enzymes to promote growth, as well as antibodies and good bacteria to shield children from disease.

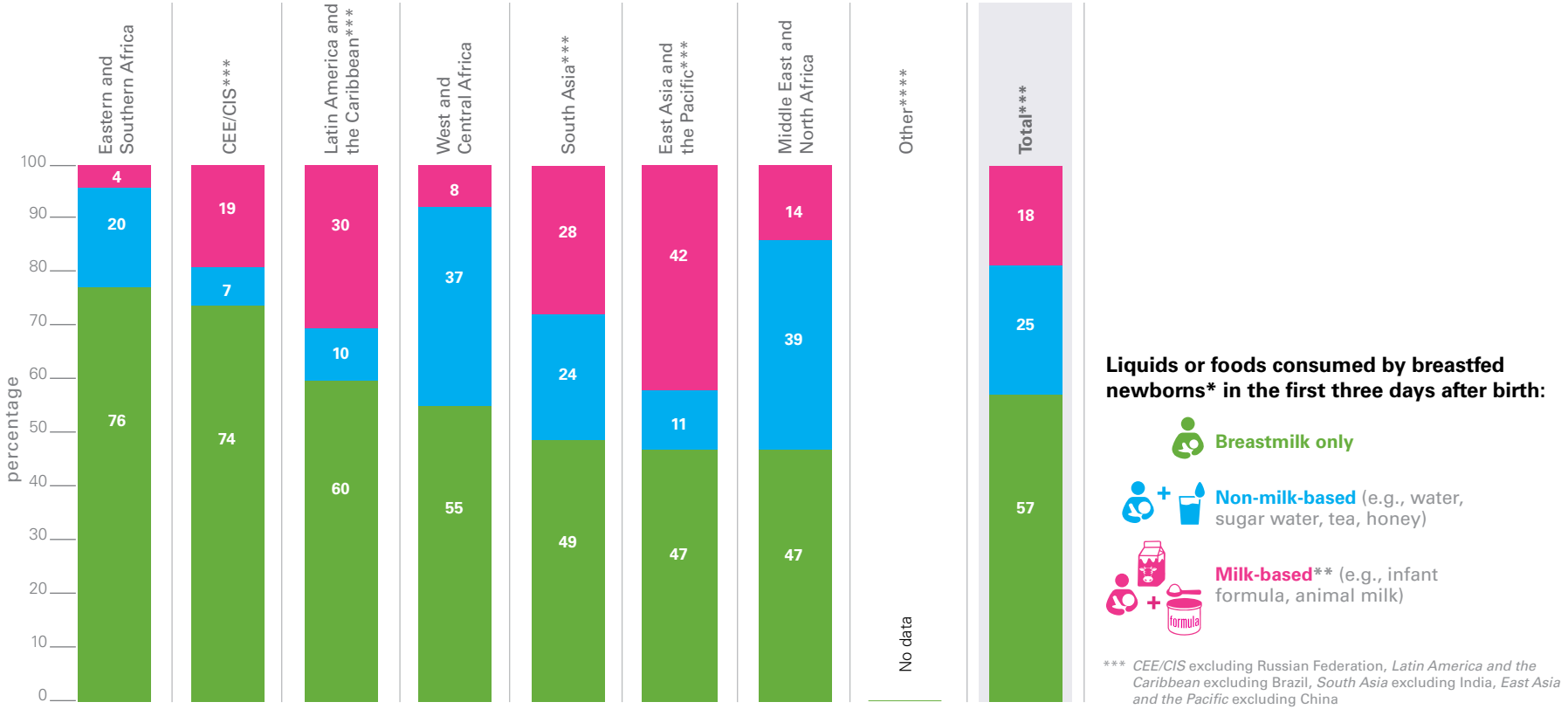
When other foods and liquids are provided, they also take up valuable space in the newborn's small stomach, leaving little room for more complete breastmilk.

### What do the numbers tell us?

Nearly two out of five breastfed newborns receive foods or liquids other than breastmilk in the earliest days of life, when their bodies are most vulnerable.

Less than half of breastfed newborns in East Asia and the Pacific, the Middle East and North Africa and South Asia receive only breastmilk in the first three days of life. In East Asia and the Pacific, 42 per cent of newborns are given a milk-based liquid –such as infant formula or animal milk. Feeding newborns infant formula in the first three days of life is also common in Latin America and the Caribbean and CEE/CIS. In the Middle East and North Africa, 40 per cent of newborns receive non-milk-based liquids – such as plain water, sugar water or tea. In South Asia, both milk- and non-milk-based foods and liquids are commonly fed to newborns shortly after birth. The most common liquid given in the first three days after birth in West and Central Africa is plain water, which can harbour pathogens and other substances that are life-threatening for newborns.

# In three regions, more than half of breastfed newborns receive liquids or foods other than breastmilk in the first three days of life




Per cent of breastfed newborns* receiving breastmilk only, non-milk-based liquids/foods, and milk-based liquids** in the first three days of life, by region, 2015

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Notes:** Analysis is based on a subset of 72 countries with available data for feeding type in the first three days between 2010–2014 covering 47 per cent of the global population. Regional estimates are presented only where adequate population coverage (≥50 per cent) is met. *Data represent newborns who were ever breastfed. No data on liquids consumed in the first three days of life were available for infants who were never breastfed. **Children in this category may also have been fed non-milk-based liquids. ***To meet adequate population coverage in each region, CEE/CIS does not include Russian Federation, Latin America and the Caribbean does not include Brazil, South Asia does not include India and East Asia and the Pacific does not include China. The "Total" is not labeled as a global figure as data were available for <50% of the global population. ****Other refers to mainly high-income countries not included within UNICEF programme regions.

## Timing of initiation

# DELAYING THE FIRST CRITICAL CONTACT

### Does the timing of initiation vary when newborns receive anything other than breastmilk in the first days of life?

Feeding newborns anything other than breastmilk has the potential to delay their first critical contact with their mother. The evidence is clear that the longer this delay in breastfeeding initiation, the greater the risk of death.[1] It can also make it more difficult to establish breastfeeding over the long term. This is compounded when liquids are provided through a bottle with a teat, as it can interfere with the infant's natural ability to suckle at the breast. In contrast, putting babies to the breast within an hour of birth has been described as a 'gateway behaviour' that is strongly predictive of future exclusive breastfeeding.[13,14]

In some societies, special foods or drinks such as tea, butter, sugar water, honey or animal milk are provided as part of a birth ceremony that takes place before the newborn has been put to the breast.[11] Such ceremonies often require a revered family member or religious practitioner to perform certain duties,[11] and ensuring that person's presence can delay early initiation even longer, possibly past one day.

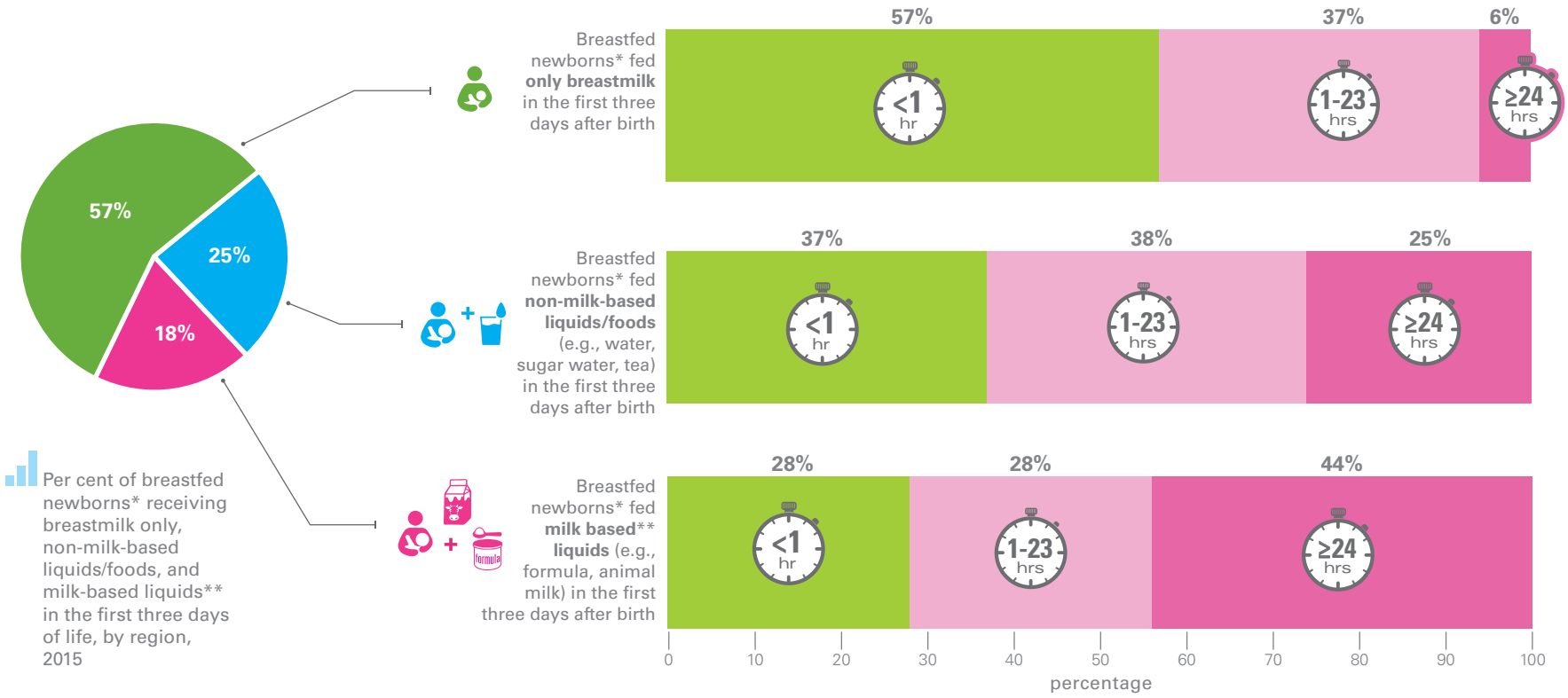
When colostrum feedings are replaced by less nutritious and often high-calorie alternatives like cow's milk, infant formula or sugar water, it creates a vicious cycle: these other liquids can satisfy the infant's hunger in the first days of life, causing him or her to breastfed less frequently; and the reduced demand for breastfeeding makes breastmilk supply more difficult to establish and maintain. In this way, feeding foods and liquids other than breastmilk in the earliest days often marks 'the beginning of the end' of exclusive breastfeeding.

### What do the numbers tell us?

Of those newborns who received milk-based liquids in the first three days after birth, nearly half had to wait one day or longer to be put to the breast. This was based on an analysis of 72 countries with available data on timing of initiation and receipt of liquids and foods other than breastmilk.

In contrast, only 6 per cent of newborns who received only breastmilk in the first few days had to wait one day or longer to be put to the breast. While more than half of them benefited from early initiation, the fact that so many were not put to the breast earlier is a missed opportunity. We must identify why this life-saving practice is not starting sooner and take the necessary steps to ensure that every child is put to the breast within this first crucial hour.

# Nearly half of all newborns receiving milk-based liquids had to wait 24 hours or longer to be put to the breast




Per cent of breastfed newborns* receiving breastmilk only, non-milk-based liquids/foods, and milk-based liquids** in the first three days of life, by region, 2015

Per cent of infants put to the breast at <1 hour, 1–23 hours and ≥24 hours after birth, by feeding type in the first three days of life, 2015

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Note:** Analysis is based on a subset of 72 countries with available data between 2010–2014 for timing of initiation by feeding type in the first three days, covering 47 per cent of the global population; therefore this is not a global figure. *Data represent newborns who were ever breastfed. No data on liquids consumed in the first three days of life were available for infants who were never breastfed. **Children in this category may also have been fed non-milk-based liquids.

## Early initiation and birth attendants

# BETTER LEVERAGING AN EXISTING RESOURCE

### How can birth attendants support the early initiation of breastfeeding?

The support of a skilled attendant at the moment of birth helps mothers deliver newborns safely and saves lives. Globally, three quarters of all newborns are now delivered with the help of a skilled birth attendant, which includes doctors, nurses or midwives,[15] while the remaining are delivered by unskilled attendants (e.g., traditional birth attendants) or other friends and family members.

There are important opportunities for birth attendants to better support the early initiation of breastfeeding. While their presence at birth is essential for the health and safety of mother and child, alone it is not enough to ensure that breastfeeding begins on time; they should also take the lead in placing the newborn on the mother's chest within an hour of birth and help her initiate breastfeeding. To do this effectively, birth attendants must be trained with the knowledge and skills to provide the best support to mothers who might be facing challenges related to breastfeeding. Maternity facilities need to have policies in place that emphasize the importance of early initiation and monitor their implementation.

Research in Ethiopia has shown that mothers who give birth at home are seven times more likely to feed newborns substances other than breastmilk when compared with mothers who deliver in health institutions.[16] This may be due to the misguided influence of family members and traditional birth attendants in the home, compared with the support of skilled attendants in health facilities.

However, health-care workers may also have misconceptions about early feeding practices, many of which are fueled by the invasive presence of the breastmilk substitute industry. This means that many inappropriate practices are still ingrained within maternity facilities around the world.[14] Such issues need to be addressed to ensure that the presence of a skilled attendant is leveraged to help – rather than hinder – early initiation.

### What do the numbers tell us?

Despite the potential of skilled birth attendants to support mothers in initiating breastfeeding immediately after birth, in most regions studied, early initiation was not facilitated by the presence of a doctor, nurse or midwife. This was particularly true in South Asia and in the Middle East and North Africa, where early initiation rates were somewhat lower among births attended by skilled providers. Among countries studied in the Middle East and North Africa the rate of early initiation was 45 per cent for births attended by a skilled health provider compared with 58 per cent for births attended by 'unskilled attendants or others.' The exception was sub-Saharan Africa, where early initiation rates were somewhat higher among births attended by skilled health providers.

In CEE/CIS, where almost all births are attended by skilled health providers, rates of early initiation are poor: only two thirds of newborns delivered by skilled attendants were put to the breast within an hour. In the countries studied in Latin America and the Caribbean, among newborns delivered by a skilled health provider, less than half were put to the breast within the first hour of life. These regions have some of the strongest health systems and access to skilled support in the world – they need to better leverage the presence of these health-care providers to improve breastfeeding.

There is enormous potential for skilled birth attendants to better support women in initiating breastfeeding immediately after birth – to not take advantage of this is a missed opportunity. Programmatic attention should be given to creating an enabling environment for breastfeeding within health facilities, including by improving the breastfeeding support provided by skilled birth attendants. They deliver the majority of the world's babies and are the easiest to reach with training and breastfeeding skill development.

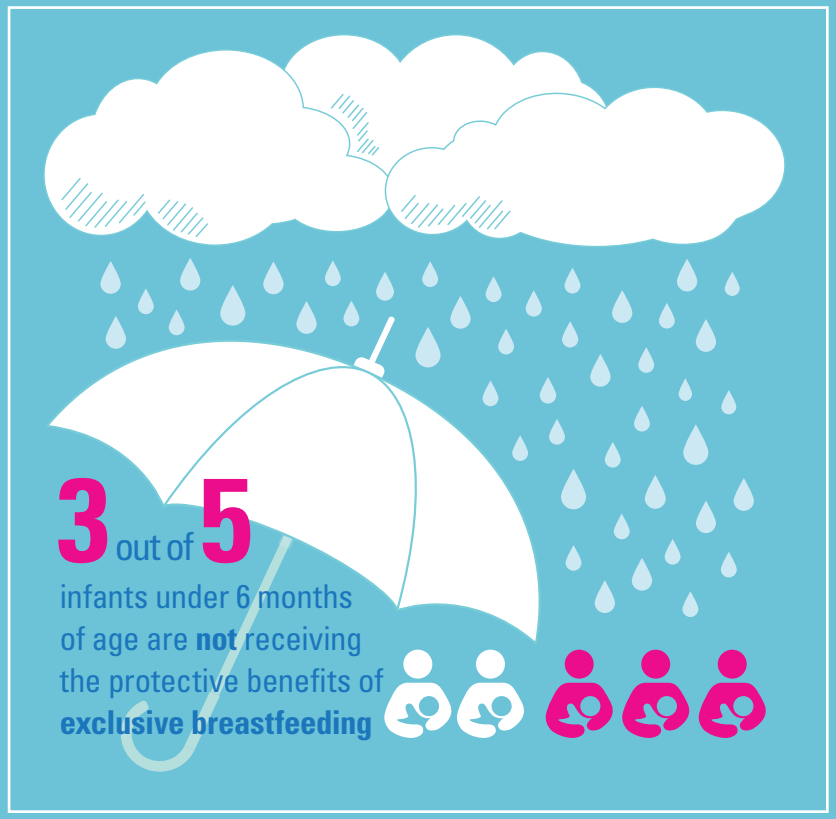
# Skilled birth attendants can provide vital support for early initiation – we need to seize this opportunity


Per cent of newborns put to the breast within one hour of birth by type of birth delivery attendant, by region, 2015

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Note:** Analysis is based on a subset of 66 countries with recent (2010-2014) disaggregated data for early initiation rates by type of delivery provider covering 46 per cent of the global population. Regional estimates are presented only where adequate population coverage (≥50 per cent) is met. *To meet adequate population coverage, South Asia does not include India, East Asia and the Pacific does not include China, Latin America and the Caribbean does not include Brazil and CEE/CIS does not include Russian Federation. **Early initiation rates were not included for the birth attendant category of "Unskilled or other" for CEECIS because an insignificant proportion of births were delivered by these attendants in the majority of countries studied in this region and therefore did not allow for reliable early initiation estimates to be generated for this disaggregation. ***Other refers to mainly high-income countries not included within UNICEF programme regions.

A woman breastfeeds her child in Mexico City. © UNICEF/UNI182996/ Quintos

# EXCLUSIVE BREASTFEEDING



## Exclusive breastfeeding

# A PROTECTIVE SHIELD FOR THE FIRST SIX MONTHS

### Why does exclusive breastfeeding matter for child survival and development?

Exclusive breastfeeding – feeding infants nothing but breastmilk for the first six months of life – is the safest and healthiest option for children everywhere. It has great potential to save lives. This is because exclusive breastfeeding guarantees infants a food source that is uniquely adapted to their needs, while also being safe, clean, healthy and accessible – no matter where they live. In low- and middle-income countries, infants who received mixed feeding (foods and liquids in addition to breastmilk before 6 months) were up to 2.8 times more likely to die than those who were exclusively breastfed.[1] The risk of dying was highest among those not breastfed at all; these infants had a 14-fold higher risk of mortality when compared with their exclusively breastfed peers.

There is overwhelming evidence that breastfeeding protects against pneumonia and diarrhoea – the two leading killers of children under 5. In fact, improved breastfeeding could prevent nearly half of all diarrhoeal episodes and a third of all respiratory infections.[2] The impact on childhood infections exists in rich and poor countries alike. The UK Millennium Cohort Survey estimated that if all children in the United Kingdom were breastfed exclusively for six months, it could prevent 53 per cent of hospital admissions for diarrhoea, and 27 per cent of hospitalizations for lower respiratory infections each month.[3]

Mothers share their immune systems with their babies through exclusive breastfeeding, and breastmilk promotes the growth of good bacteria, with lifelong benefits *(see box, page 18)*. New research also suggests that pre-term infants fed only breastmilk have better long-term heart capacity and shape than those fed with infant formula.[4] Mothers benefit too, as exclusive breastfeeding delays ovulation,[5] thereby empowering them with greater reproductive autonomy, especially in settings with limited access to quality contraception.

Exclusive breastfeeding also facilitates interaction and bonding between mother and baby at a critical moment in early brain development when the right nourishment, positive stimulation and care can enhance the formation of neural pathways.[6]

While breastfeeding is common in most parts of the world, exclusive breastfeeding is not the norm; most infants are given other foods or liquids throughout the first six months due to cultural practices, other household, livelihood or employment barriers and the misguided belief that breastmilk alone is not enough. In the context of HIV, mothers may fear their breastmilk is harmful to their child. Yet mothers living with HIV can breastfeed safely when they adhere to treatment *(see box, breastfeeding with HIV, page 34)*.

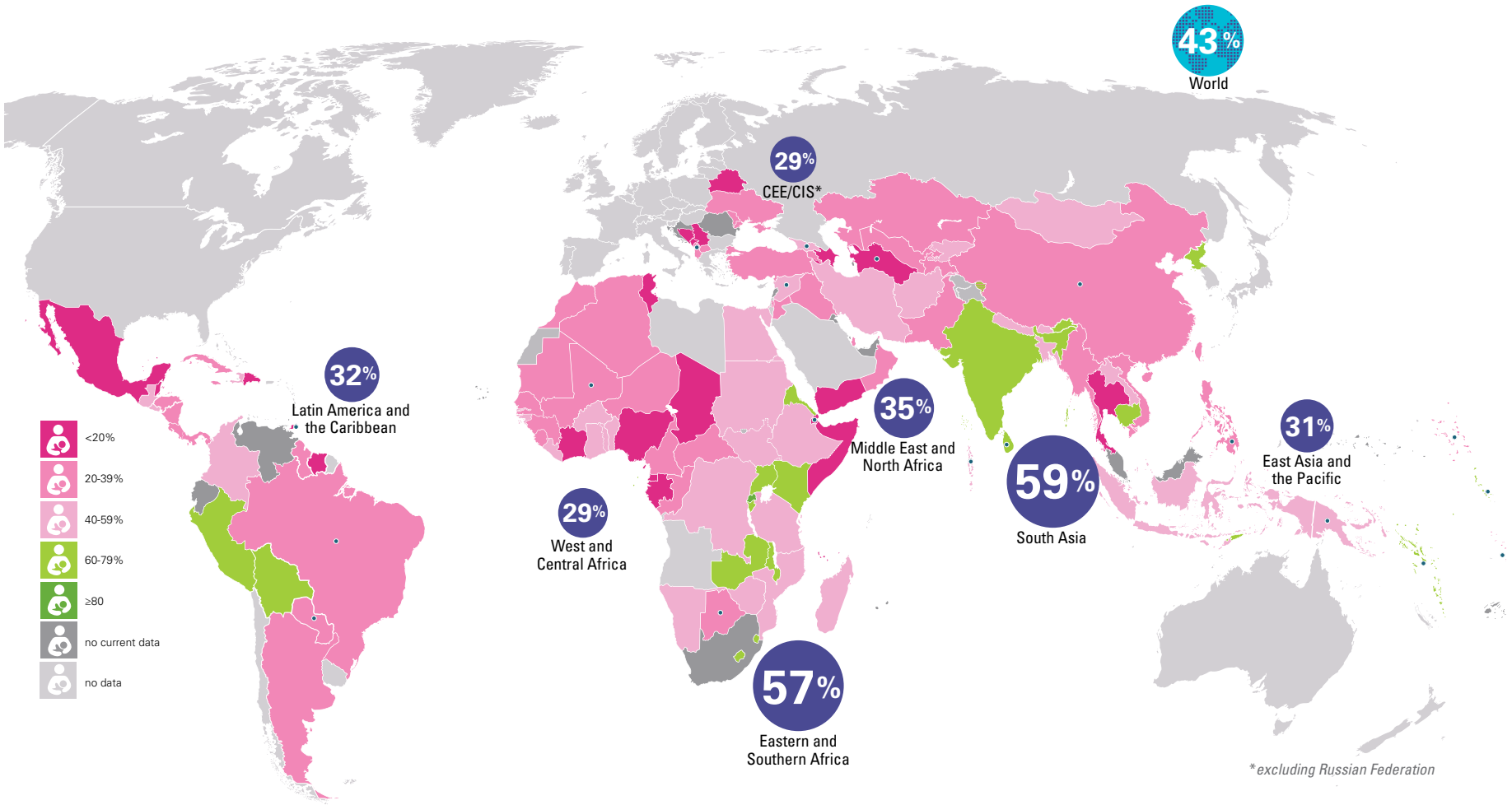
Various other factors can undermine women's confidence in exclusive breastfeeding – from the opinions of well-intentioned family members, to the advice of poorly trained health workers, to the influence of the breastmilk substitute industry. Exclusive breastfeeding for six months requires a considerable investment of time on the part of mothers. Societal pressures, family responsibilities and paid and unpaid work present significant challenges for women everywhere.

### What do the numbers tell us?

Globally, just over 40 per cent – or two out of five – of the world's infants under 6 months of age are exclusively breastfed.

The highest exclusive breastfeeding rates are found in South Asia, where almost 60 per cent of infants under 6 months of age receive only breastmilk, followed by Eastern and Southern Africa, where 57 per cent of infants under 6 months of age benefit from this practice. What is most concerning is that in the remaining regions only one third or fewer of young infants benefit from this practice. We still know very little about the situation in high-income countries, and it is imperative that we bridge this gap.

# Globally, just over two out of five infants are exclusively breastfed




Per cent of infants 0-5 months of age exclusively breastfed, by country and region, 2015

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources, 2010-2016 (● denotes countries with older data between 2005-2009; data from these countries are not included in the regional aggregates except for China (2008) which is used for the East Asia and the Pacific and World averages). Countries shaded in dark grey have estimates from 2004 or earlier and are thus represented as having "no current data"; these countries are not included in the regional aggregates. *CEE/CIS does not include Russian Federation. **Note:** These maps are stylized and not to scale and do not reflect a position by UNICEF 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 the Abyei area has not yet been determined.

# WHAT STANDS IN OUR WAY

## What are babies around the world fed in the first 6 months – and why does it matter?

Infant feeding patterns vary across regions, but one thing is common to all: most infants receive other foods and liquids in addition to breastmilk during the first six months of life. Some infants are fed plain water; non-milk-based liquids (e.g., sugar water, tea); milk-based liquids (e.g., infant formula or animal milk); or solid, semi-solid or soft foods (e.g., cereals, rice, etc.). Other liquids and foods given during this time may displace breastmilk feedings, often resulting in reduced breastmilk production and early weaning.[7]

There is nothing more complete than breastmilk in the first six months; other foods and liquids are at best unnecessary and, at worst, life threatening. These substances can be contaminated with pathogens and can expose infants to infection, especially in the absence of clean drinking water and adequate sanitation. While the best protection against mortality comes from exclusive breastfeeding, even some breastfeeding has benefits when compared with not breastfeeding at all *(see graphic on the right)*.[1]

Evidence has shown that foods introduced before 6 months of age add no growth advantage over exclusive breastfeeding.[8] Rather, there is evidence to suggest that anything other than exclusive breastfeeding increases the risk of overweight and obesity.[9] Anything other than breastmilk is also hard on babies' developing digestive systems and threatens the healthy composition of bacteria in the gut *(see box, page 18)*.[2,10] In addition, purchasing breastmilk substitutes can put an economic strain on families.

In low- and high-income countries alike, breastmilk is all children need during the first six months to survive, grow, develop and thrive.

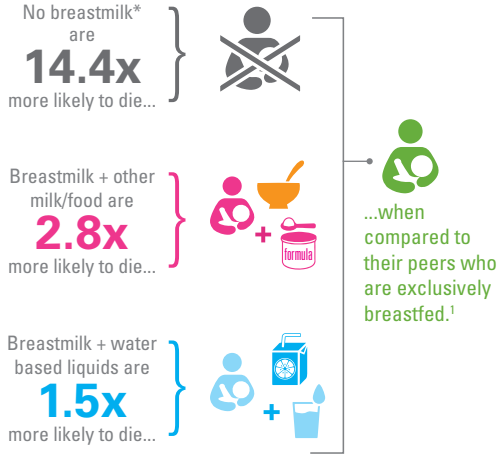
## What do the numbers tell us?

Area graphs illustrate feeding patterns for infants between birth and 5 months of age. The ideal pattern would be solid green to indicate exclusive breastfeeding. Other colors represent infants receiving foods and liquids in addition to breastmilk, as well as infants receiving no breastmilk at all.

In every region of the world, rates of exclusive breastfeeding decline steadily from birth to 5 months of age. Milk-based liquids are hindering exclusive breastfeeding to at least some degree in all regions. Where common, milk-based liquids are even fed to large proportions of infants as young as 0–1 months of age. In West and Central Africa, the greatest obstacle to exclusive breastfeeding is plain water. Significant numbers of infants are being introduced to complementary foods too early in all regions, particularly in Latin America and the Caribbean. Many infants in this region are also not receiving any breastmilk at all.

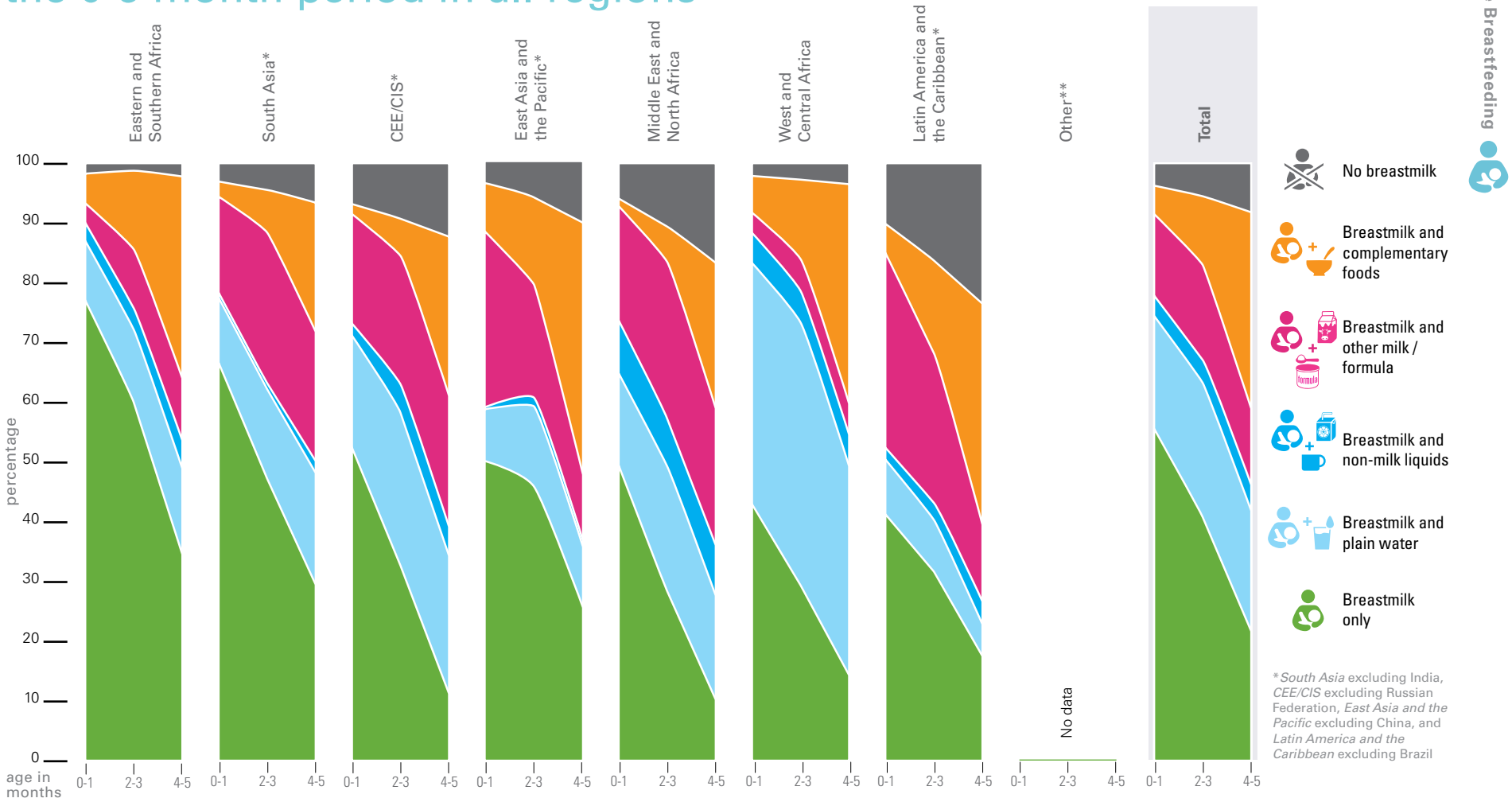
### Exclusive breastfeeding prevents unnecessary deaths[1]

Infants 0-5 months of age living in low- and middle-income countries **receiving**:




*In addition, infants 0-5 months of age receiving no breastmilk are **6.1x** more likely to die than those receiving breastmilk + water based liquids and **3.9x** more likely to die than those receving breastmilk + other milk/food.

# The rate of exclusive breastfeeding declines steadily throughout the 0-5 month period in all regions




Per cent of infants aged 0-5 months receiving breastmilk only, breastmilk and plain water, breastmilk and non-milk liquids, breastmilk and other milk/formula, breastmilk and complementary foods and no breastmilk, by region, 2016*

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Note:** Analysis is based on a subset of 75 countries with available data for the development of area graphs covering 43 per cent of the global population. Regional estimates are presented only where adequate population coverage (≥ 50 per cent) is met. *To meet adequate population coverage, South Asia does not include India, CEE/CIS does not include Russian Federation, East Asia and the Pacific does not include China and Latin America and the Caribbean does not include Brazil. The "Total" is not labelled as a global figure as data were available for <50% of the global population. **Other refers to mainly high-income countries not included within UNICEF programme regions.

## Trends in exclusive breastfeeding

# THE RACE TO IMPROVE CHILD SURVIVAL

### Are we making progress?

Progress to improve exclusive breastfeeding has stagnated over the past 15 years. Five out of the seven regions with trend data have current rates around 30 per cent, and all of them have improved very little, if at all, in more than a decade. The rates of exclusive breastfeeding in Latin America and the Caribbean and in East Asia and the Pacific, for example, have remained unchanged since 2000.

Global rates have improved modestly, with change driven almost entirely by South Asia, where exclusive breastfeeding rates increased by 17 percentage points between 2000 and 2015. While this is an important achievement, still fewer than two in three infants benefit from exclusive breastfeeding in the region.

However, regional and global averages can mask progress in individual countries. Over the past few years, some countries have made incredible strides in improving exclusive breastfeeding rates,[11] and these achievements tell us that rapid improvements are possible. Out of the 101 countries with recent data, 32 have already reached the 2025 World Health Asembly (WHA) target of an exclusive breastfeeding rate of at least 50 per cent. This target provides room for countries to be ambitious and not only maintain current achievements, but make further improvements as well.

### Why should we act now?

Advancement on exclusive breastfeeding could provide the foundation to not only achieve SDGs 2 and 3 related to food insecurity, malnutrition and child deaths, but also wider development goals pertaining to education and poverty reduction, among others. To achieve these goals, we need investments from governments at all levels of society to create a more enabling environment for mothers who choose to breastfeed. This includes arming mothers with the knowledge to make informed decisions, and providing them with the support they need from their families, communities, workplaces and health-care systems to make exclusive breastfeeding for the first six months happen.

Scaling-up of efforts to protect, promote and support exclusive breastfeeding would provide a cost-effective pathway to achieving the SDGs.

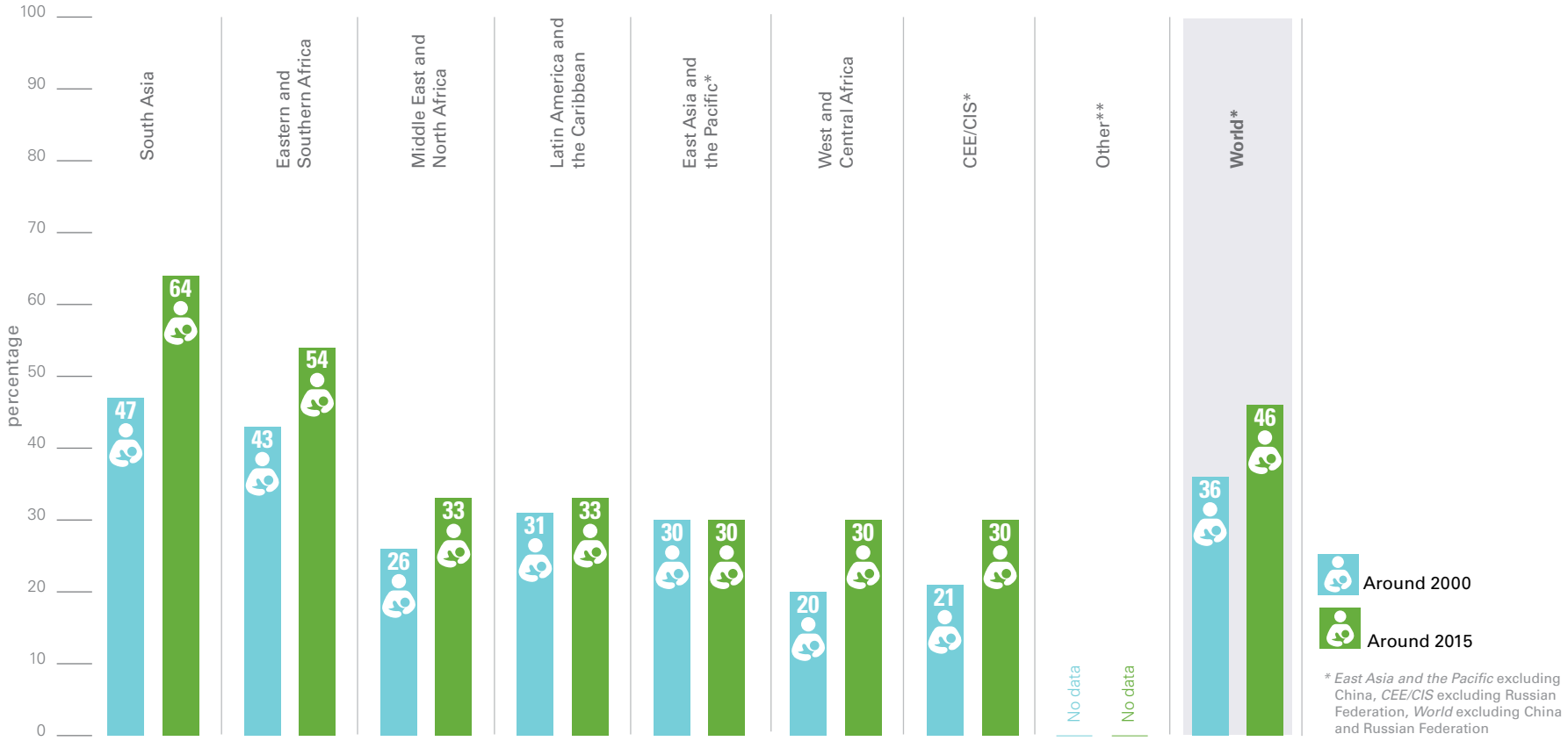
### Breastfeeding with HIV: The facts[12]

A mother's HIV status does not have to stop her from breastfeeding. Mothers living with HIV can breastfeed their infants safely provided they adhere to antiretroviral therapy (ART) from the time of diagnosis throughout the breastfeeding period. Adherence to ART is critical to preventing virus transmission from mother to baby and for the health of the mother.

In resource-limited settings, where safe water and sanitation cannot be assured, and where diseases like pneumonia and diarrhoea are widespread, the benefits of breastfeeding greatly outweigh the risk of HIV transmission. When mothers living with HIV breastfeed for 12 months while adhering to ART, the rate of transmission at the end of that period is reduced to below 5 per cent[13] when compared with a transmission rate of 20–45 per cent without any interventions.[13]

WHO and UNICEF recently updated the guidelines on infant feeding and HIV.[14] The new guidelines clarify that ART is effective at reducing virus transmission even when mothers practice mixed feeding, although exclusive breastfeeding remains the ideal. What's more, mothers living with HIV and taking ART can continue breastfeeding until age 2 and beyond. Regardless of how long a mother with HIV intends to breastfeed, she can be assured that even shorter durations of breastfeeding while on ART are better than never initiating breastfeeding at all.

# South Asia has made the greatest strides in exclusive breastfeeding of all regions



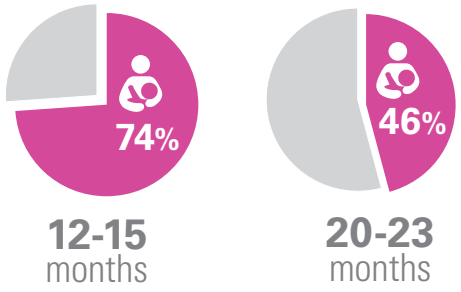

Trends in per cent of infants aged 0-5 months exclusively breastfed, by region, around 2000 and around 2015

**Source**: UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Notes**: Analysis is based on a subset of 78 countries with comparable trend data covering 68 per cent of the global population (excluding China and Russian Federation) for around 2000 (1997-2003) and 70 per cent for around 2015 (2010-2016). Rates for 2015 may differ from current rates presented elsewhere as trends are based on a subset of countries with baseline data. Regional estimates are presented only where adequate population coverage (≥ 50 per cent) is met.
*To meet adequate population coverage, East Asia and the Pacific does not include China and CEE/CIS does not include Russian Federation. **Other refers to mainly high-income countries not included within UNICEF programme regions.

Health extension worker Elsebeth Aklilu takes a break from counselling women and their children on best nutrition practices to breastfeed her own son, Fikir Mekete, at the health post in the village of Maderia, in Gemechis, a woreda (district) of Oromia Region, Ethiopia.
©UNICEF/UNI183051/Nesbitt

# CONTINUED BREASTFEEDING

Breastfeeding rates **decrease** by about **one third** between 12 and 23 months.




The per cent of children breastfed at 1 year (12-15 months) and 2 years (20-23 months)

## Continued breastfeeding

# DURATION MATTERS

### What is continued breastfeeding and why does it matter?

Continued breastfeeding refers to the continuation of frequent, on-demand breastfeeding, from the period between 6 months and 2 years of age or beyond [1]. Children should begin eating solid, semi-solid or soft foods starting at 6 months of age. Breastmilk remains a key source of essential fats, proteins and other nutrients during this period, particularly in settings with limited access to a diverse range of foods [1, 2].

Children who are still breastfed after 1 year of age can meet a substantial portion of their energy needs with the breastmilk in their diet. [1] Continued breastfeeding is also vital during illness; while sick children often have little appetite for solid food, continued breastfeeding can help prevent dehydration while also providing the nutrients required for recovery.[3] The disease protection provided by breastfeeding continues throughout the breastfeeding period and is not just for newborns and young infants. Indeed, continued breastfeeding could prevent half of all deaths during the 12–23 month period. [4]

Across all income levels, continued breastfeeding is consistently associated with higher performance in intelligence tests among children and adolescents. This cognitive boost translates into improved educational attainment, increased long-term earnings and better productivity – with those children breastfed longer than 12 months benefiting most from these gains [5]. In high-income countries, longer periods of breastfeeding may reduce a child's risk of overweight and obesity. [4]

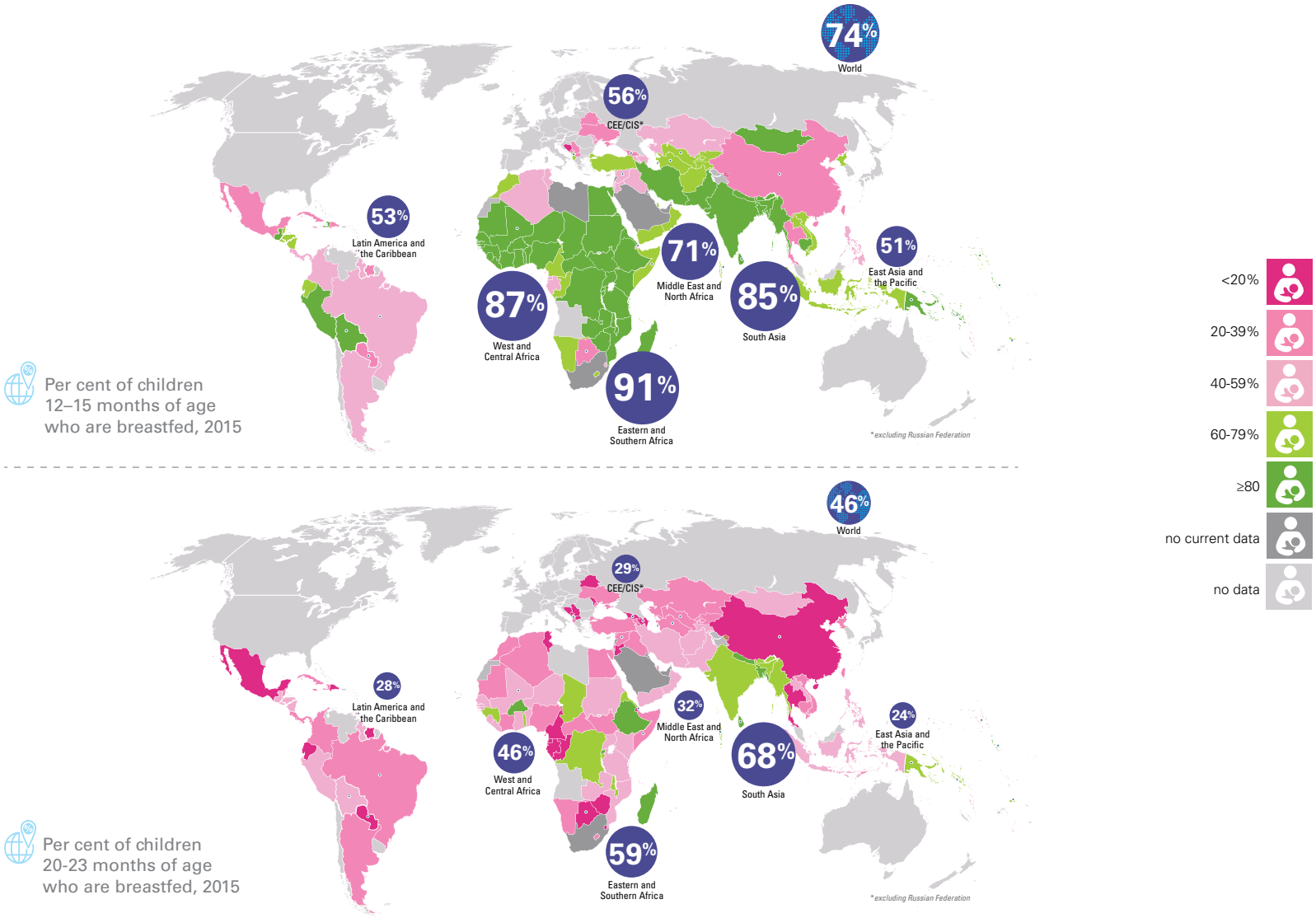
Continued breastfeeding is also important for mothers; for every 12 months of breastfeeding in their lifetime, there is a 6 per cent reduction in the risk of breast cancer.[4] Research also suggests that continued breastfeeding could improve birth spacing and potentially protect against ovarian cancer and type 2 diabetes.

### What do the numbers tell us?

Globally, continued breastfeeding rates drop from 74 per cent at 1 year (for 12–15 month-olds), to 46 per cent at 2 years (for 20–23 month-olds). At all age intervals, rates of continued breastfeeding are highest in Eastern and Southern Africa, West and Central Africa, and South Asia. The highest rates of continued breastfeeding at 2 years are in South Asia, where nearly 70 per cent of these children are still breastfed.

In East Asia and the Pacific, CEE/CIS and Latin America and the Caribbean, only half of all children are still breastfed at 1 year, and continued breastfeeding rates drop to less than 30 per cent in all of these regions at 2 years. While this analysis has no data for the 'other' region (mostly high-income countries outside of UNICEF programme regions), the Lancet 2016 Breastfeeding Series estimates that only one in four children in high-income countries were breastfed at 1 year– a much lower figure than that of all other regions. [4]

# Globally, less than half of children are still breastfed at 2 years




**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources, 2010-2016 (• denotes countries with older data between 2005-2009; data from these countries are not included in the regional aggregates except for China (2008) which is used for the East Asia and the Pacific and World averages). Countries shaded in dark grey have estimates from 2004 or earlier and are thus represented as having "no current data"; these countries are not included in the regional aggregates. *CEE/CIS does not include Russian Federation. Note: These maps are stylized and not to scale and do not reflect a position by UNICEF 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 the Abyei area has not yet been determined.

## Continued breastfeeding and household wealth

# BRIDGING THE EQUITY GAP

### Who is benefiting from continued breastfeeding?

Breastfeeding has great potential to reduce inequities. The impacts of continued breastfeeding on disease prevention, IQ, educational attainment and future earning potential can help bring even the poorest children closer to the same starting line as their wealthier peers. [4]

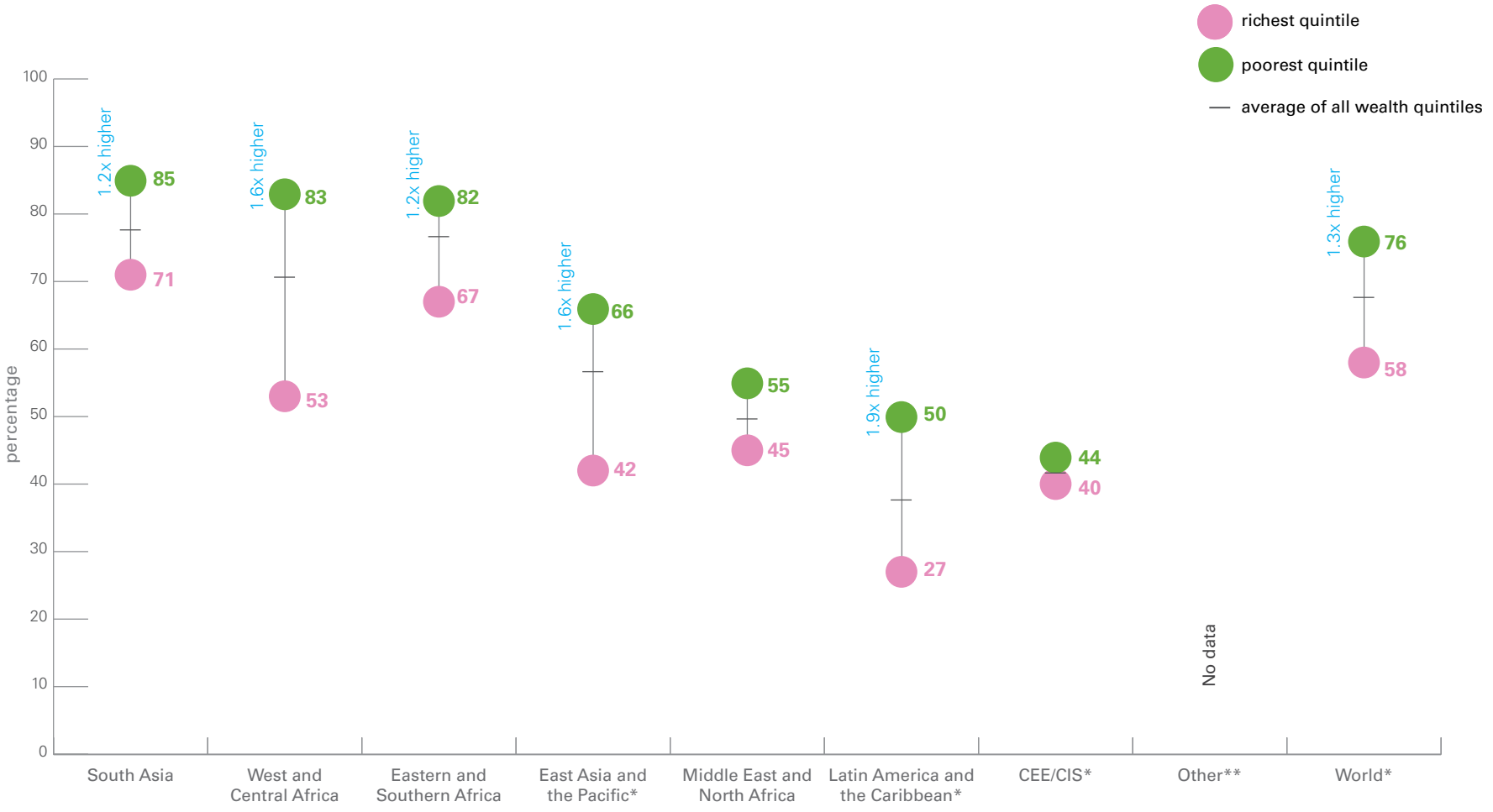
Breastfeeding is one of the few positive health behaviors that is more prevalent in poor than in rich countries; and within low- and middle-income-countries themselves, poor women breastfeed longer than rich women. [4] However, these practices are vulnerable to external influences, such as the breastmilk substitutes industry, which is always searching for ways to expand its reach and penetrate new markets. [6] This means that protecting breastfeeding from commercial influences should be a priority, particularly in the world's poorest places. [4]

The lower cognitive ability associated with not breastfeeding has economic costs. Globally, these losses are estimated at about $300 billion annually. High-income countries lose more than $230 billion annually due to low rates of breastfeeding, while low- and middle-income countries lose more than $70 billion annually. [7]

### What do the numbers tell us?

Across nearly all regions, more women from the poorest households continue to breastfeed after the first year of life when compared with women from the wealthiest households. This is particularly true in Latin America and the Caribbean, where the continued breastfeeding rate among women in the poorest households is nearly double that of their wealthier counterparts. Similarly, in West and Central Africa and East Asia and the Pacific, the rates among women from the poorest quintile are 1.6 times higher than women in the richest quintile. The difference between richest and poorest is negligible among countries studied in CEE/CIS.

# Continued breastfeeding rates are highest among women from the poorest households




Per cent of children age 12–23 months that are beastfed, by wealth quintile and region, 2015

**Source:* *East Asia and the Pacific* excluding China, *Latin America and the Caribbean* excluding Brazil, *CEE/C* excluding Russian Federation, *World* excluding Chi Brazil and Russian Federation

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Note:** Analysis is based on a subset of 74 countries with recent (2010–2014) disagregated data for continued breastfeding at 12–23 months covering 76 per cent of the global population (excluding China and Russian Federation). Regional estimates are presented only where adequate population coverage (≥50 per cent) is met. *To meet adequate population coverage, East Asia and the Pacific does not include China, Latin America and the Caribbean does not include Brazil and CEE/CIS does not include Russian Federation. **Other refers to mainly high income countries not included within UNICEF programme regions.

## Continued breastfeeding trends

# EXTENDING THE BENEFITS THROUGH EARLY CHILDHOOD

### Are we making progress?

The continued breastfeeding rate at 2 years has remained relatively unchanged since 2000. The only region to see an increase in continued breastfeeding over the 15-year period was CEE/CIS; and even with these gains only a third of children aged 20–23 months are currently breastfed.

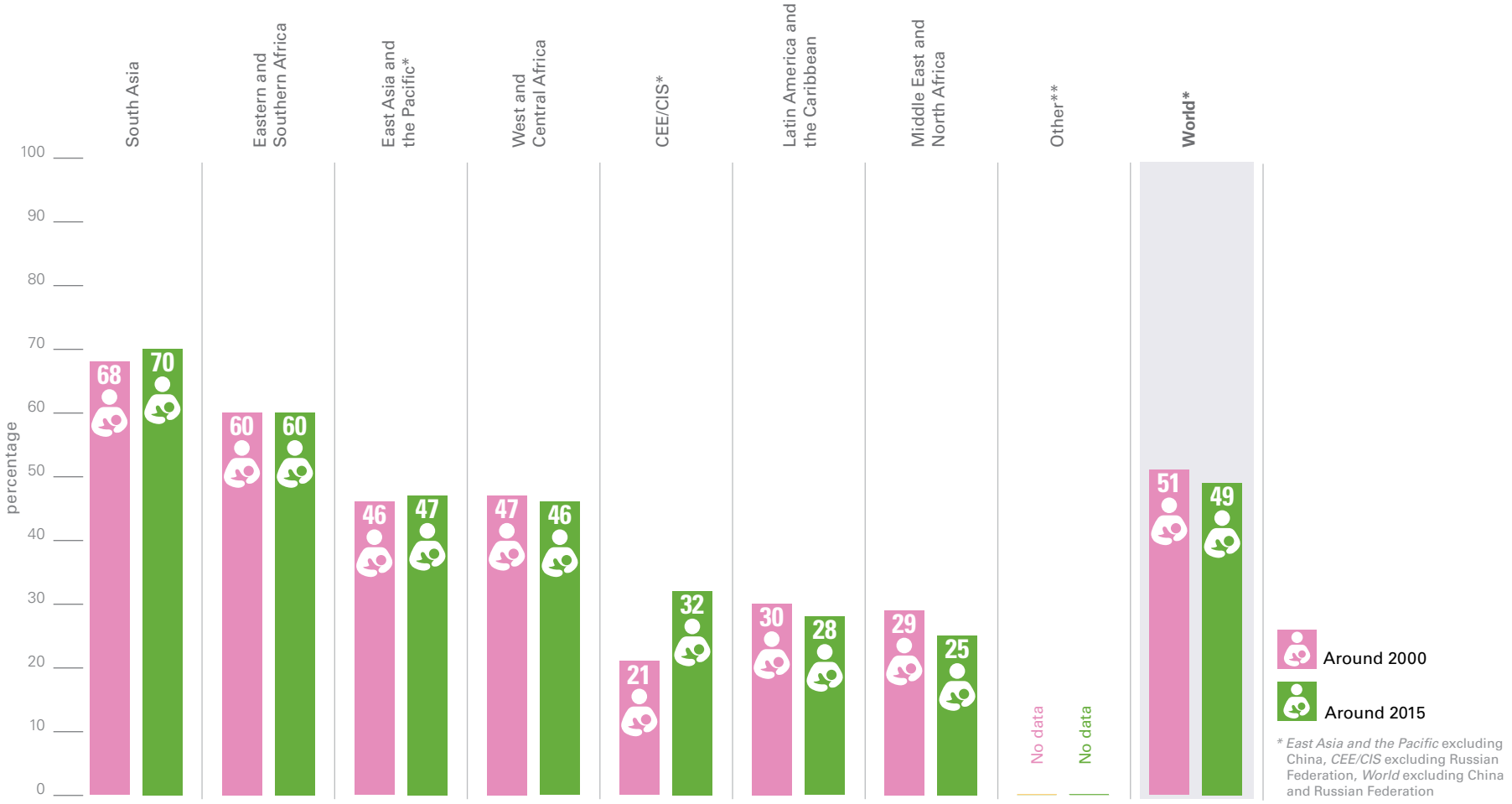
While South Asia has the highest rates for continued breastfeeding at 2 years, there has been no progress over the past 15 years. A similar trend analysis for continued breastfeeding at 1 year (not presented here) also revealed little to no progress, with only CEE/CIS showing a modest increase of 10 percentage points over the same period.

### Why should we act now?

Both rich and poor countries have a lot to gain from better rates of continued breastfeeding. With its impact on school performance, potential earnings and productivity, continued breastfeeding could contribute to the achievement of many SDG targets – including those related to ending poverty, promoting lifelong learning, improving economic growth and building inclusive societies.

Without concerted international attention, however, continued breastfeeding rates will not improve and may even decrease as time goes on. As income levels rise around the world, there is a risk that rates of continued breastfeeding in poor countries may begin to resemble the low rates in more industrialized countries. [4]The ever-expanding reach of the breastmilk substitutes industry has the potential to erode continued breastfeeding practices, even in places where they are the most established.[8] The proliferation of follow-up formulas and growing up milks marketed for children in the 6-23 month old range is a troubling trend, and better efforts are needed to ensure that the promotion of such products is prohibited by national legislation.

# Continued breastfeeding rates have remained stagnant for over a decade




Trends in percentage of children aged 20-23 months who are breastfed, by region, around 2000 and around 2015

**Source:** UNICEF global databases, 2016, based on MICS, DHS and other nationally representative sources.
**Notes:** Analysis is based on a subset of 79 countries with comparable trend data covering 70 per cent of the global population (excluding China and Russian Federation) for around 2000 (1997-2003); and 71 per cent of the global population for around 2015 (2010-2016). Rates for 2015 may differ from current rates presented elsewhere as trends are based on a subset of countries with baseline data. Regional estimates are presented only where adequate population coverage (≥50 per cent) is met. *To meet adequate population coverage, East Asia and the Pacific does not include China and CEE/CIS does not include Russian Federation. **Other refers to mainly high income countries not included within UNICEF programme regions.

## The International Code of Marketing of Breastmilk Substitutes

# PROTECTING BREASTFEEDING WITH POLICY

### How does the Code protect and promote breastfeeding?

The International Code of Marketing of Breastmilk Substitutes, adopted by the WHA in May 1981, and subsequent relevant WHA resolutions (known together as 'the Code') aim to protect and promote breastfeeding by prohibiting the promotion of breastmilk substitutes, including infant formula, bottles, teats, follow-up formulas and growing-up milks marketed for feeding infants and young children up to the age of 3 years. By integrating the Code's provisions into national legislation, governments can help protect mothers and health-care workers from the commercial pressures that seek to undermine breastfeeding.

While adopting the Code's provisions into enforceable legal measures is vital at the national level, the promotion of breastmilk substitutes remains widespread even in some countries where the Code is reflected in national law.[1] Monitoring and enforcement mechanisms are thus critical to ensuring that legislation is fully implemented in practice.

The breastmilk substitutes industry uses aggressive marketing tactics to target pregnant women, new mothers and health workers.[1] Such promotion often includes false claims that formula is equal or superior to breastfeeding, can improve digestive problems, or will ensure that babies sleep through the night – all of which erode women's confidence in breastfeeding.[2] These unethical practices negatively impact breastfeeding outcomes, particularly when promoted by health workers.[1] For example, hospital discharge packages containing infant formula have been shown to negatively impact exclusive breastfeeding.[3] Other evidence suggests that mothers who do not receive infant formula at discharge are 58 per cent more likely to exclusively breastfeed.[4]

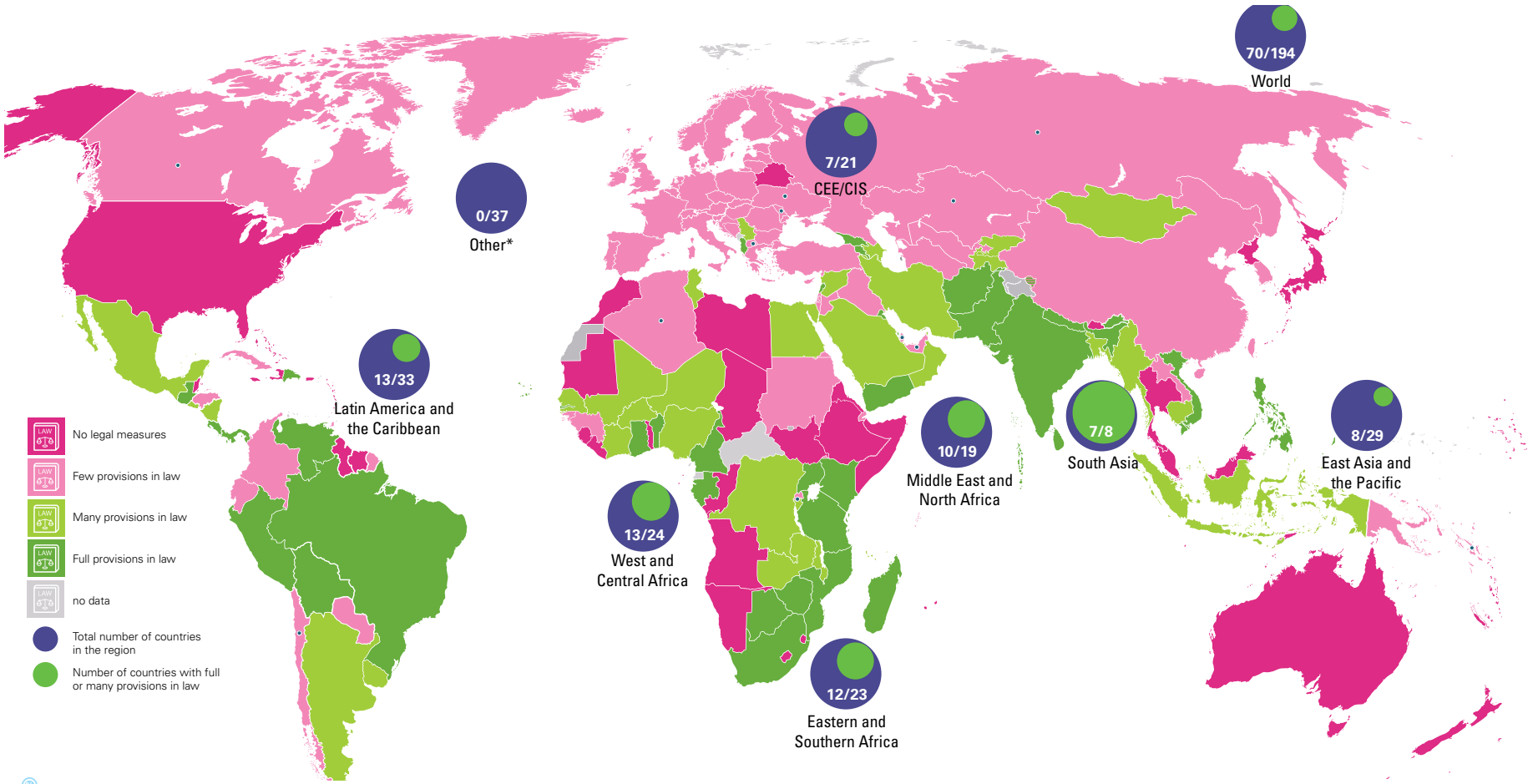
We are fighting an uphill battle against a powerful and well-funded machine, with an increasingly wide reach. Estimates suggest that the global infant formula market will be worth $71 billion by 2019, with the highest growth expected in the Middle East, Africa and the Asia-Pacific regions.[5] The immense budget and influence of the industry sits in stark contrast to the limited investments made in national breastfeeding policies and programmes [1, 6] – and this urgently needs to change.

### What do the numbers tell us?

Globally, there are 135 countries with some Code provisions in place. However, the strength and comprehensiveness of these measures vary widely across countries. The map presented here distinguishes between the number of countries with legislation reflecting the Code's *full* legal measures and *many* of its measures (noted in shades of green), versus countries with legislation reflecting only a *few* legal measures or *none* at all (noted in shades of pink).

The status of Code adoption and implementation also varies by region. In South Asia, seven out of eight countries have laws in place reflecting all or many of the Code's provisions, while more than half of all countries in Latin America and the Caribbean, CEE/CIS, East Asia and the Pacific, and the 'other' region have minimal or no legislation. Indeed, in the 'other' region – which is composed of high-income countries outside of UNICEF's programming – not a single country has adopted all or many of the Code's measures into legislation. The limited evidence we have suggests that breastfeeding rates are extremely low in these countries [7] and better Code legislation would be a critical step towards creating a more favourable environment for breastfeeding.[1]

# 135 countries have some legal measures in line with the Code - yet most of these need to be further strengthened




Status of national measures on the International Code of Marketing of Breastmilk Substitutes and subsequent relevant World Health Assembly resolutions, by country and by region*, 2016

**Source:** WHO, UNICEF, IBFAN. Marketing of Breast-milk Substitutes: National Implementation of the International Code. Status Report 2016. Geneva: World Health Organization; 2016.( • denotes countries have no dedicated Code legislation, but have Code-related provisions incorporated in other legal measures.). The regional summaries indicate the number of countries with a full provision or many provision law (green circle) out of all countries in the region (blue circle). *Other refers to mainly high income countries not included within UNICEF programme regions (see annex 2). *Note:* These maps are stylized and not to scale and do not reflect a position by UNICEF 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 the Abyei area has not yet been determined.

Young lactating mothers and mothers with infants are checked and encouraged to breastfeed at home and give complementary food to their infants beyond six months of age. A house to house monitoring is done by the local Auxillary Nurse Midwife (ANM) to ensure this practice.

# THE WAY FORWARD

# THE WAY FORWARD

## What do we need to do better?

Breastfeeding is not a one-woman job: the support of families, communities, workplaces and the health system – backed by sound investments from governments – is needed to make it work in all settings, including in humanitarian contexts.

Government leadership and investments in protective policies and legislation, support for skilled health-care workers, and community engagement are the foundations for obtaining better breastfeeding rates. These investments are the keys to building an enabling environment where women who choose to breastfeed can do so with the support they need at all levels.

### Government support

National legislation is needed to **ban the unethical promotion of breastmilk substitutes,** including false claims by producers that their products are equal or superior to breastmilk. To achieve this, countries should adopt the **International Code of Marketing of Breastmilk Substitutes and subsequent relevant WHA resolutions** (the Code) into national laws and policies.

To adequately enforce the Code, governments should establish a **monitoring body** with the power to institute punitive measures, such as penalties for non-compliance. This body should be independent, transparent and free from commercial influence.[1]

Given the many challenges that countries face in adopting and monitoring Code legislation, WHO and UNICEF established Network for the Global Monitoring and Support for Implementation of the International Code of Marketing of Breast-milk Substitutes and subsequent WHA resolutions[2] (NetCode), with the aim of strengthening the capacities of governments and civil society to monitor and implement the Code. Governments can **seek technical assistance from NetCode** actors, and use monitoring protocols to identify obstacles and solutions to full Code implementation.

During **emergencies,** the unmonitored and uncontrolled distribution of breastmilk substitutes (including infant formula) as well as the breakdown of the systems that support breastfeeding mothers pose additional threats to breastfeeding. At the same time, some infants have no possibility of breastfeeding, and therefore breastmilk substitutes are the only option for them. Policies and strategies, as well as human resources and adequate services in other sectors, such as water and sanitation, need to be put into place to protect children's lives.

Countries should enact family leave and workplace breastfeeding policies, which at least minimally conform to the **International Labour Organization's maternity protection guidelines**, including provisions for the informal sector. Paid breaks guaranteed for at least six months were associated with an 8.9 percentage point increase in exclusive breastfeeding in some countries.[3]

Interventions supporting breastfeeding-related policies and strategies need to be **adequately financed** and prioritized.

Governments around the world have committed to achieving the WHA Nutrition targets, including the one on exclusive breastfeeding, by 2025. Unless progress is monitored regularly, governments cannot achieve what they have promised. If not already in place, mechanisms to allow for the **regular reporting on standard breastfeeding indicators** need to be established.

### Health system support

Mothers need adequate **prenatal counselling and education on breastfeeding** and infant care in the lead-up to birth. Research shows that harmful practices – such as feeding anything other than breastmilk before infants are put to the breast – decline when caregivers are aware of the risks.[4]

Whether birth takes place in a home, health centre or hospital, improved maternal health-care coverage and **quality lactation counselling**

**and support after delivery** are crucial to improving early initiation rates. Given that the vast majority of births are now delivered by skilled attendants,[5] there are clear opportunities to better leverage their skills to improve early initiation. For this to happen, doctors, nurses and midwives need to be trained to provide breastfeeding support, and early initiation of breastfeeding must be framed as the last phase in the reproductive cycle and part of the natural sequence of events following birth.

There is a need to better institutionalize the protection, promotion and support for breastfeeding in maternity facilities, including via strengthening the Ten Steps of the WHO/UNICEF **Baby-friendly Hospital Initiative** (BFHI). BFHI's *Ten Steps to Successful Breastfeeding* include baby-friendly hospital policies, capacity building of staff and key practices like supporting early initiation of breastfeeding, not providing any other foods or liquids, allowing 'rooming in' of mother and baby and referring mothers to support structures upon discharge. Baby-friendly hospitals abide by the Code and monitor their practices regularly. Implementing the Ten Steps package has proven to lead to improved breastfeeding outcomes.[6]

Implementation of the Ten Steps also helps to **dissuade non-evidence based practices** – such as the routine separation of mother and baby and the supplementation of healthy newborns with infant formula – and facilitates mothers and their babies getting an early start to breastfeeding. The rise in Caesarean deliveries, for example, contributes to poor initiation rates in many countries;[7] however, with the right support, even most newborns delivered by Caesarean section can be put to the breast within the first hour of life.

Health service breakdowns are common in emergencies and compromise the health and well-being of mothers and children. It is essential for governments to invest in risk-informed health systems that can adapt effectively adapt to humanitarian contexts.

## Workplace support

The employers of the millions of women worldwide working in formal labour markets need to adequately implement protective policies like **maternity leave** and provide **space and time for nursing breaks** to ensure that breastfeeding and work are not mutually exclusive. Those in the informal economy need additional support from families and communities to manage the demands of work while breastfeeding.

## Family and community support

National policy makers must identify the **social and cultural factors** that influence breastfeeding practices from birth up to 2 years of age and beyond, and address them with targeted behaviour change communication strategies and programming adapted to different contexts and relevant target groups, including community leaders, the baby's father and grandparents, as well as the mother herself.

Being a child's sole food source for six months requires an important time investment from mothers. Family and community **support and encouragement** can help make this commitment easier for women by being supportive of their decisions and assisting with household and family responsibilities, such as the preparation of family meals, household chores and the care of older children. Family based counselling, involving fathers and other relatives, is an important opportunity to address gender roles and educate these other family members on how to best support mothers who choose to breastfeed. In addition, adolescent girls and boys need education on life skills including future parenting and the importance of infant care and feeding practices.

Within communities, women-to-women support groups and other **forms of social support** are valuable opportunities for breastfeeding mothers to share experiences and overcome challenges in a supportive environment and their establishment should be encouraged. Additional measures are required during emergencies, when community support systems and health services may be compromised or inaccessible.

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**Annex 1**

# Notes on the data

## A. GENERAL NOTE ON THE DATA

Data presented in this report are derived from UNICEF's global databases, which include only data that are internationally comparable and statistically sound. The report draws on nationally representative household surveys such as Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS). Data presented in this report generally reflect information available as of April 2016. Given the time necessary to collect, analyse and report nationally representative data, the data presented here may not always reflect the current situation. This is especially the case in countries and areas recently experiencing crises, where the situation of children and women can deteriorate rapidly. More detailed information on methodology and data sources is available at <data.unicef.org/nutrition/iycf>.

This report includes the latest population estimates and projections from *World Population Prospects: The 2015 revision* (United Nations, Department of Economic and Social Affairs, Population Division, 2015). Data quality is likely to be adversely affected for countries that have recently suffered disasters, especially where basic country infrastructure has been fragmented or where major population movements have occurred.

Efforts have been made to maximize the comparability of statistics across countries and over time. Data presented here are subject to evolving methodologies, revisions of time series data (e.g., ecalculation of exclusive breastfeeding rates to cover infants aged 0–5 months given definitional change from the previous age group of 0–3 months) and changing regional classifications. Also, data comparable from one year to the next are unavailable for the indicators presented in this report. Averages may fluctuate with the addition of new countries, even within the same time period covered in this report (2010–2016). This is because surveys can take years before release in some instances. It is therefore not advisable to compare data across UNICEF reports over time.

The numbers presented in this report are available online via the UNICEF global statistical databases at <data.unicef.org/nutrition/iycf>. Please refer to this website for the latest data.

## B. NOTE TO THE READER ON INTERPRETING DATA IN THIS REPORT

In the preceding pages, there is a focus on presenting (i) current regional and global estimates; (ii) regional and global trends between 2000 and 2015; and (iii) disparities that may exist between different groups. In many cases, different groups of countries were included within regional and global aggregates for different analyses due to lack of comparable data for all countries for all indicators, across all time periods and disaggregation.

### Data availability

The conclusions we draw are driven by the data we have available. The analyses in this report are based on a limited number countries, for a limited number of indicators, and a limited number of background characteristics. Regional and global estimates are presented only when the available data are representative of at least 50 per cent of corresponding regions'* population, unless otherwise noted. Many estimates do not include China, as comparable data are often not available in UNICEF databases for this country, especially for the baseline time period of 'around 2000' used in trend analyses as well as disaggregation. For some analyses, re-anlaysis of raw datasets was required, and therefore only a smaller subset of countries for which such data were available is included. Footnotes in the individual charts indicate the number of countries used for each analysis.

### Understanding different measures

In an equity analysis, the measure selected is very important. Different measures can give a different sense of the situation. In a hypothetical example, in two countries, continued breastfeeding among women from the poorest households may be two times as high as in that among women from the richest households (a ratio of 3). However, in the first country the absolute difference between the rates could be just 6 percentage points (poorest = 9 per cent and richest = 3 per cent), whereas in the second country, the absolute difference could be 20 percentage points (poorest= 30 per cent and richest = 10 per cent). Thus, the assessment of differentials between population groups will vary depending on whether absolute or relative

* For a complete list of countries and territories in each region, please see Annex 2.

differences (or both) are presented. Furthermore, with regard to estimates for different background characteristics, analysis may indicate higher or lower rates for certain groups, but rates may be even higher or lower for other background characteristics that are not available for analysis. These comparisons between different groups are meant to inform the reader as to whether there are differences for a given indicator between, for example, the poorest and the richest households. Because such differences in indicator levels can depend on an array of factors, it is necessary to be aware that comparisons across groups are susceptible to misinterpretation.

### Confidence intervals

It is important to note that estimates for subpopulations are bracketed by a larger range of uncertainty than aggregate estimates, and thus must be interpreted with caution.

## C. INDICATOR DEFINITIONS

Data presented in this report are based on those collected using the standard breastfeeding indicators as defined in WHO's 2008 publication, *Indicators for Assessing Infant and Young Child Feeding Practices: Part 1 – Definitions*. Data for these indicators are collected though household surveys such as MICS and DHS. With the exception of early initiation of breastfeeding, they are based on questions about liquid and food intake of children aged 0–23 months in the 24 hours preceding the survey. The standard indicator definitions are as follows:

**Early initiation of breastfeeding:**
**Numerator:** Children born in the past 24 months who were put to the breast within one hour of birth
**Denominator:** Children born in the past 24 months

**Exclusive breastfeeding**
**Numerator:** Infants 0–5 months of age who received only breastmilk* during the previous day
**Denominator:** Infants 0–5 months of age

**Continued breastfeeding at 1 year**
**Numerator:** Children 12–15 months of age who received breastmilk during the previous day
**Denominator:** Children 12–15 months of age

**Continued breastfeeding at 2 years**
**Numerator:** Children 20–23 months of age who received breastmilk during the previous day
**Denominator:** Children 20–23 months of age

An additional indicator was defined for the purpose of this report in order to avail insight on equity where samples sizes were too small for many countries when using the standard indicator definition. Data were re-analysed to generate estimates for the following indicator:

**Continued breastfeeding of children aged 12–23 months**
**Numerator:** Children 12–23 months of age who received breastmilk during the previous day
**Denominator:** Children 12–23 months of age

In addition, the MICS, DHS, and some other household surveys, collect data on the liquids and foods consumed in the first three days of life for children who were ever breastfed. Estimates in line with the following definition are presented:

**Breastfed newborns receiving liquids or foods in the first three days of life**
**Numerator:** Ever breastfed children born in the past 24 months who received any liquid or food apart from breastmilk in the first three days of life
**Denominator:** Ever breastfed children born in the past 24 months

## D. GLOBAL GOALS AND TARGETS

This report references the following global goals and targets:

### Sustainable Development Goals 2030

The Sustainable Development Goals were adopted alongside the 2030 Agenda for Sustainable Development by United Nations Member States. These goals aim to end poverty, fight inequality and injustice, and tackle climate change by 2030.

More detailed information about the SDGs and the 2030 Agenda for Sustainable Development is available at <un.org/sustainabledevelopment>.

### World Health Assembly (WHA) Nutrition Global Targets 2025

The World Health Organization's (WHO) Member States have endorsed global targets for improving maternal, infant and young child nutrition, and are committed to monitoring progress. The targets are vital for identifying priority areas for action and catalysing global change.

More information about the global targets, including policy briefs, indicators and tracking tools, is available at <who.int/nutrition/global-target-2025/en/>.

* While exclusive breastfeeding refers to feeding only breastmilk, the definition allows for the infant to have received medicines, oral rehydration solution, and vitamin and mineral preparations.

Annex 2

# Regional Classifications

### Eastern and Southern Africa

Angola; Botswana; Burundi; Comoros; Eritrea; Ethiopia; Kenya; Lesotho; Madagascar; Malawi; Mauritius; Mozambique; Namibia; Rwanda; Seychelles; Somalia; South Africa; South Sudan; Swaziland; Uganda; United Republic of Tanzania; Zambia; Zimbabwe

### West and Central Africa

Benin; Burkina Faso; Cabo Verde; Cameroon; Central African Republic; Chad; Congo; Côte d'Ivoire; Democratic Republic of the Congo; Equatorial Guinea; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Liberia; Mali; Mauritania; Niger; Nigeria; Sao Tome and Principe; Senegal; Sierra Leone; Togo

### Middle East and North Africa

Algeria; Bahrain; Djibouti; Egypt; Iran (Islamic Republic of); Iraq; Jordan; Kuwait; Lebanon; Libya; Morocco; Oman; Qatar; Saudi Arabia; State of Palestine; Sudan; Syrian Arab Republic; Tunisia; United Arab Emirates; Yemen

### South Asia

Afghanistan; Bangladesh; Bhutan; India; Maldives; Nepal; Pakistan; Sri Lanka

### East Asia and the Pacific

Brunei Darussalam; Cambodia; China; Cook Islands; Democratic People's Republic of Korea; Fiji; Indonesia; Kiribati; Lao People's Democratic Republic; Malaysia; Marshall Islands; Micronesia (Federated States of); Mongolia; Myanmar; Nauru; Niue; Palau; Papua New Guinea; Philippines; Republic of Korea; Samoa; Singapore; Solomon Islands; Thailand; Timor-Leste; Tonga; Tuvalu; Vanuatu; Viet Nam

### Latin America and the Caribbean

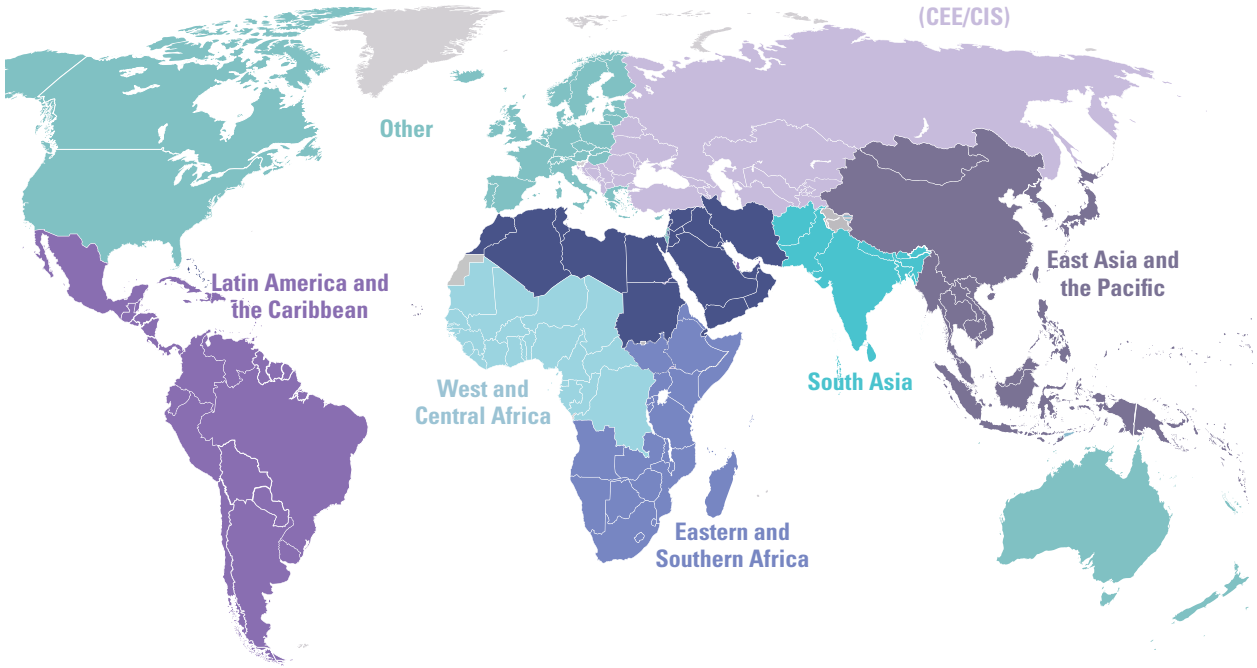
Antigua and Barbuda; Argentina; Bahamas; Barbados; Belize; Bolivia (Plurinational State of); Brazil; Chile; Colombia; Costa Rica; Cuba; Dominica; Dominican Republic; Ecuador; El Salvador; Grenada; Guatemala; Guyana; Haiti; Honduras; Jamaica; Mexico; Nicaragua; Panama; Paraguay; Peru; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Uruguay; Venezuela (Bolivarian Republic of)

### Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS)

Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Bulgaria; Croatia; Georgia; Kazakhstan; Kyrgyzstan; Montenegro; Republic of Moldova; Romania; Russian Federation; Serbia; Tajikistan; the former Yugoslav Republic of Macedonia; Turkey; Turkmenistan; Ukraine; Uzbekistan

### Other countries outside of these regions

Andorra; Australia; Austria; Belgium; Canada; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Holy See; Hungary; Iceland; Ireland; Israel; Italy; Japan; Latvia; Liechtenstein; Lithuania; Luxembourg; Malta; Monaco; Netherlands; New Zealand; Norway; Poland; Portugal; San Marino; Slovakia; Slovenia; Spain; Sweden; Switzerland; United Kingdom; United States



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