CHAPTER 2

What the numbers say

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KEY FINDINGS

1. **SURVIVE**: Survival of small and sick newborns is key for ending millions of preventable child deaths, and meeting SDGs 10 years from now. High quality care could halve in-patient newborn deaths before 2030.

2. **THRIVE**: Most later disabilities are preventable, by addressing priority conditions, and focusing on small, vulnerable newborns. This is one of the most effective investments in human capital.

3. **TRANSFORM**: 30 million small & sick newborns worldwide require hospital care each year as part of UHC. Health systems can and must be transformed.
# Global and national targets relevant to small and sick newborns

<table>
<thead>
<tr>
<th>SDG targets by 2030</th>
<th>SURVIVE</th>
<th>THRIVE</th>
<th>TRANSFORM</th>
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</thead>
<tbody>
<tr>
<td><strong>SDG 3.2: Survival</strong></td>
<td>End preventable deaths</td>
<td>Ensure health, growth and development</td>
<td>Achieve universal health coverage (UHC)</td>
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<tr>
<td>Neonatal mortality rate reduced to ≤ 12 deaths/1000 live births; Under-5 mortality reduced to ≤ 25 deaths/1000 live births</td>
<td><strong>SDG 3 Global Nutrition Plan:</strong> By 2025, reduce LBW by 30%</td>
<td><strong>SDG 5: Gender</strong></td>
<td>Achieve gender equality, empower all women, end gender-based violence</td>
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**Which data are needed?**

- Deaths: Mortality rates
- Equity: Stratified by sex, socio-economic status, urban/rural location, etc.
- Birthweight/growth, Gestational age
- Neonatal morbidity and impairment outcomes
- Child development measures

**Sources:** SDGs, Every Newborn, Every Newborn Measurement Improvement Roadmap

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**SURVIVE and THRIVE: Transforming care for every small and sick newborn**

#EveryNewborn #EveryChildAlive
KEY FINDINGS

1. SURVIVE: Ending preventable newborn deaths
CHAPTER 2. What the numbers say

Each year…

• 2.5 million newborns die within the first 28 days of life
• 2.6 million are stillborn

Targets for 2030

Every Newborn Action Plan aims to end preventable deaths, setting the first ever specific mortality targets:

• $\leq 12$ neonatal deaths per 1000 live births
• $\leq 12$ stillbirths per 1000 total births

Neonatal target was included in SDGs. First time ever!! Stillbirths not included, yet also deserve more attention.

99% of these deaths happen in low- and middle-income countries, especially for the poorest families BUT almost all are preventable.
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Target 3.2 Ending preventable child & newborn deaths
First ever global target for newborn survival in SDGs

TARGET BY 2030:
National NMR of 12 or less

~40 countries need to double current progress

SURVIVE and THRIVE: Transforming care for every small and sick newborn

#EveryNewborn
#EveryChildAlive

78 high burden countries have set newborn targets.

>90 countries implementing action plan.
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WHERE? Regional progress

Projected date per region to reach SDG NMR national target of 12 & to reach average NMR for high-income countries of 3

With same progress, it will be next century before some African newborns have same chance of survival as a newborn in North America, Europe, or Australasia.
WHERE? National progress to reach newborn target by 2030

Humanitarian contexts: highest rates, slowest progress.
Some countries will meet SDG 3.2 over 100 years too late.
### Estimated effects of lower health care coverage during COVID-19

118 countries using LiST modelling based on lower coverage for 6 months

<table>
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<tr>
<th>Coverage of care</th>
<th>Maternal deaths excess</th>
<th>Newborn &amp; child deaths excess</th>
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<tbody>
<tr>
<td>15% reduction</td>
<td>12,190</td>
<td>253,500</td>
</tr>
<tr>
<td>45% reduction</td>
<td>56,700</td>
<td>1,157,000</td>
</tr>
</tbody>
</table>

**Biggest effects on deaths**

- Care at birth
- Inpatient care for sick newborns, child infections, increased prevalence of wasting (immunization key but herd immunity initially protective)

Roberton T et al Early estimates of the indirect effects of the coronavirus pandemic on maternal + child mortality in LMIC. Lancet GH, 2020
CHAPTER 2. What the numbers say

WHEN? Highest risk for women and newborns..

- 1.3 million intrapartum stillbirths
- 1 million neonatal deaths
- ~113,000 maternal deaths
- 75% neonatal deaths

Greatest risk of death and disability

QUADRUPLE return on investment

Source: Lawn et al, Lancet Every Newborn series, 2014

“The two most important days in your life are the day you are born ... and the day you find out why.” Mark Twain (1835-1910)
WHO to focus on?

Boys or girls?
- Baby boys have biologically higher risk of death in neonatal period
- Girls are at increased social risk in some cultures

Small newborns, big problem
- 80% neonatal deaths are in vulnerable low birthweight newborns (< 2500g)
  - 2/3 are preterm
  - 1/3 are small for gestational age
CHAPTER 2. What the numbers say

WHICH conditions to focus on?
Causes of death in children under 5 years of age for 195 countries

1. Preterm birth: top cause of CHILD deaths + important cause of disability and loss of human capital

2. Birth complications

3. Neonatal infections:
   ~600,000 deaths per year
   Yet a black box for aetiology

4. Congenital conditions

5. Neonatal jaundice

WHERE to focus?

- Globally, ~80% of all births occur in hospitals, with quality gaps causing over 1 million preventable newborns deaths every year.
KEY FINDINGS

2. THRIVE: Ensuring health and well-being for every newborn
Major loss of human capital

• The world loses substantial human capital due to newborn deaths, disability.

• Neonatal conditions account for 7.5% of global total of DALYs 3x that of AIDS, similar to all cancers (Global Burden of Disease 2017)

• Under-recognized social, economic, emotional burden on parents and families caring for small and sick newborns, or if their child dies

National economic development will be like swimming against the tide unless address newborn health, growth and development, in the 1st 1000 days
CHAPTER 2. What the numbers say

Small babies affect Lifelong & intergenerational health

Fetal health and growth plus early-life environmental influences in 1st 1000 days are important for stunting, sub-optimal child development, adult risk of non-communicable diseases (NCDs).

½ of the world’s low birth weight (LBW) babies are born in South Asia, driving the NCD epidemic.

To date, limited success in any country for reducing LBW – need more innovation for promoting fetal growth and maternal health (intergenerational)

Key to measure birthweight AND gestational age. Also to measure and prevent disability
KEY FINDINGS

3. TRANSFORM: Reaching 30 million small & sick newborns with effective health systems, changing social norms
CHAPTER 2. What the numbers say

The world you are born into determines your risk of death and disability

140 million births per year

High income countries
~12 million births

Low- & middle-income countries
~44 million births at home

Upper middle income countries
~39 million births

Low- & middle-income countries
~45 million facility births

SURVIVE and THRIVE: Transforming care for every small and sick newborn

#EveryNewborn  #EveryChildAlive
CHAPTER 2. What the numbers say

Health system responses for small and sick newborns by level of care, with their impact on human capital

**LOSS OF HUMAN CAPITAL**

- 2.5 million neonatal deaths
- Millions with moderate or severe long term disability
- Millions with mild long term disability
- Other long term effects
- Parent burden

**HEALTH SYSTEM CARE NEEDED**

- 110 million newborns without major complications
  - Including 10 million small for gestational age newborns
- 20 million newborns with complications requiring inpatient hospital care
- 8-10 million newborns with severe complications

**Other long term effects**

- Millions with moderate or severe long term disability
- Millions with mild long term disability
- Other long term effects
- Parent burden

- Essential maternal & newborn care for all
- Special newborn care
- Intensive newborn care

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SURVIVE and THRIVE: Transforming care for every small and sick newborn

#EveryNewborn #EveryChildAlive
A PARENT’S STORY
Once prohibited from touching her baby, this mother now advocates for family-centred care in Hungary

“The worst part is that I could not touch my son… I felt like I could not do anything for him… I brought my milk to the hospital. I was so proud of what I had pumped… My son’s nurse said, ‘You can’t give him milk with your pre-eclampsia medication.’ And then she poured the milk down the sink. Soon after my milk dried up.”

-Lívia Nagy Bonnard, paediatric nurse
As well as transforming health & information systems, we need to challenge social norms.

It is no longer acceptable that newborns are born just to die.

Holding funerals, providing bereavement support to families and making sure every birth and every death have certificates is part of changing these norms.
CHAPTER 2. What the numbers say

Into action…

• **Urgency:** 10 years to meet SDGs yet risk of losing hard-won gains due to COVID-19 pandemic. Newborns are the most vulnerable when health systems are stretched.

• **Return on investment:** Major returns in terms of reduced deaths, disability, and improved human capital, avoiding catastrophic costs for parents & families.

• **Achievable:** Special and intensive newborn care could halve newborn deaths in hospitals, and respiratory support for preterm babies is essential to get to the SDG target of 12 deaths per 1000 live births.

• **Data for action:** We need to use the data we have, but we need more data on coverage, equity and quality of care to drive more rapid change.
More information and national data

LANCET EVERY NEWBORN
http://www.thelancet.com/series/everynewborn

LANCET ENDING PREVENTABLE STILLBIRTHS

EVERY NEWBORN ACTION PLAN
www.everynewborn.org

SURVIVE THRIVE Report

BEYOND SURVIVAL
http://www.nature.com/pr/journal/v74/n1s/index.html

LANCET MATERNAL HEALTH

LANCET MIDWIFERY

DATA REFERENCE SOURCES

WHO http://www.who.int/gho/publications/en/
UNICEF https://data.unicef.org/
COUNTDOWN TO 2030 http://countdown2030.org/
IHME http://www.healthdata.org/

MARCH Centre
London School Hygiene & Tropical Medicine
http://march.lshtm.ac.uk/
Acknowledgments

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Managing Editors for the Report
Lily Kak, Joy Lawn, Ornella Linceteto, Gina Murphy, Judith Robb-McCord, Nabila Zaka

PowerPoint slides and graphics
Stefanie Kong, Kayley LeFaiver

Overall >94 authors and experts from all over the world have input and all are appreciated!
AGENDA – Session 2
Facilitator: Dr. Gagan Gupta, Health Specialist, UNICEF

• Introduction to webinar series and speakers – Dr. Gagan Gupta, UNICEF

• Key findings for What the numbers say’, Chapter 2 of Survive & Thrive report – Prof. Joy Lawn, Director of MARCH Centre, London School of Hygiene & Tropical Medicine

• Using data to address congenital conditions in Eastern Mediterranean region – Prof. Khalid Yunis, Professor of Pediatrics, Head Division of Neonatology, American Univ of Beirut

• Retinopathy of prematurity as a leading cause of preventable blindness in Latin America & Caribbean – Prof. Pablo Duran, Regional Advisor in Perinatal Health at WHO’s Latin American Center for Perinatology

• COVID-19 in pregnant women and newborns: latest data – Dr. Ornella Lincetto, Senior Medical Officer, WHO

• Questions & answers

• Closing & next webinar