VII Congresso GdS SIN Neonatologia e Sviluppo Cure essenziali nei paesi a basse risorse

"IN CAMMINO PER IL MONDO: NEONATOLOGIA SENZA CONFINI"

18/19 Ottobre 2019 Aula magna Az. Osp. Univ. Meyer/Firenze

PKG

Per quanto concerne i moderatori, relatori, formatori, tutor, docenti è richiesta dall'Accordo Stato-Regioni apposita dichiarazione esplicita dell'interessato, di trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali relativi agli ultimi due anni.
La documentazione deve essere disponibile presso il Provider e conservata per almeno 5 anni.

Dichiarazione sul Conflitto di Interessi

Il sottoscritto_____TOMASINI BARBARA_____ in qualità di:

□ responsabile scientifico □ moderatore □ docente □ X relatore □ tutor

dell'evento "In cammino per il mondo: Neonatologia senza confini" Firenze 18/19 ottobre 2019

ai sensi dell'art. 3.3 sul Conflitto di Interessi, pag. 18,19 dell'Accordo Stato-Regione del 19 aprile 2012,
da tenersi per conto di **PKG n°106**

Dichiara

□X che negli ultimi due anni NON ha avuto rapporti anche di finanziamento con soggetti portatori di interessi commerciali in campo sanitario

□ che negli ultimi due anni ha avuto rapporti anche di finanziamento con soggetti portatori di interessi commerciali in campo sanitario (indicare quali):

_____ _____

_____ _____

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PKG

"Oltre la Golden hour - esperienza di Kangaroo Mother Care in Uganda"

Dr.ssa Barbara Tomasini Responsabile UOC TIN AOUS

Dr. Stefano Zani Referente CSI AOUS Regione Toscana

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La documentazione deve essere disponibile presso il Provider e conservata per almeno 5 anni.

Dichiarazione sul Conflitto di Interessi

Il sottoscritto_____Zani Stefano_____ in qualità di:

□ responsabile scientifico □ moderatore □ docente □ X relatore □ tutor

dell'evento "In cammino per il mondo: Neonatologia senza confini" Firenze 18/19 ottobre 2019

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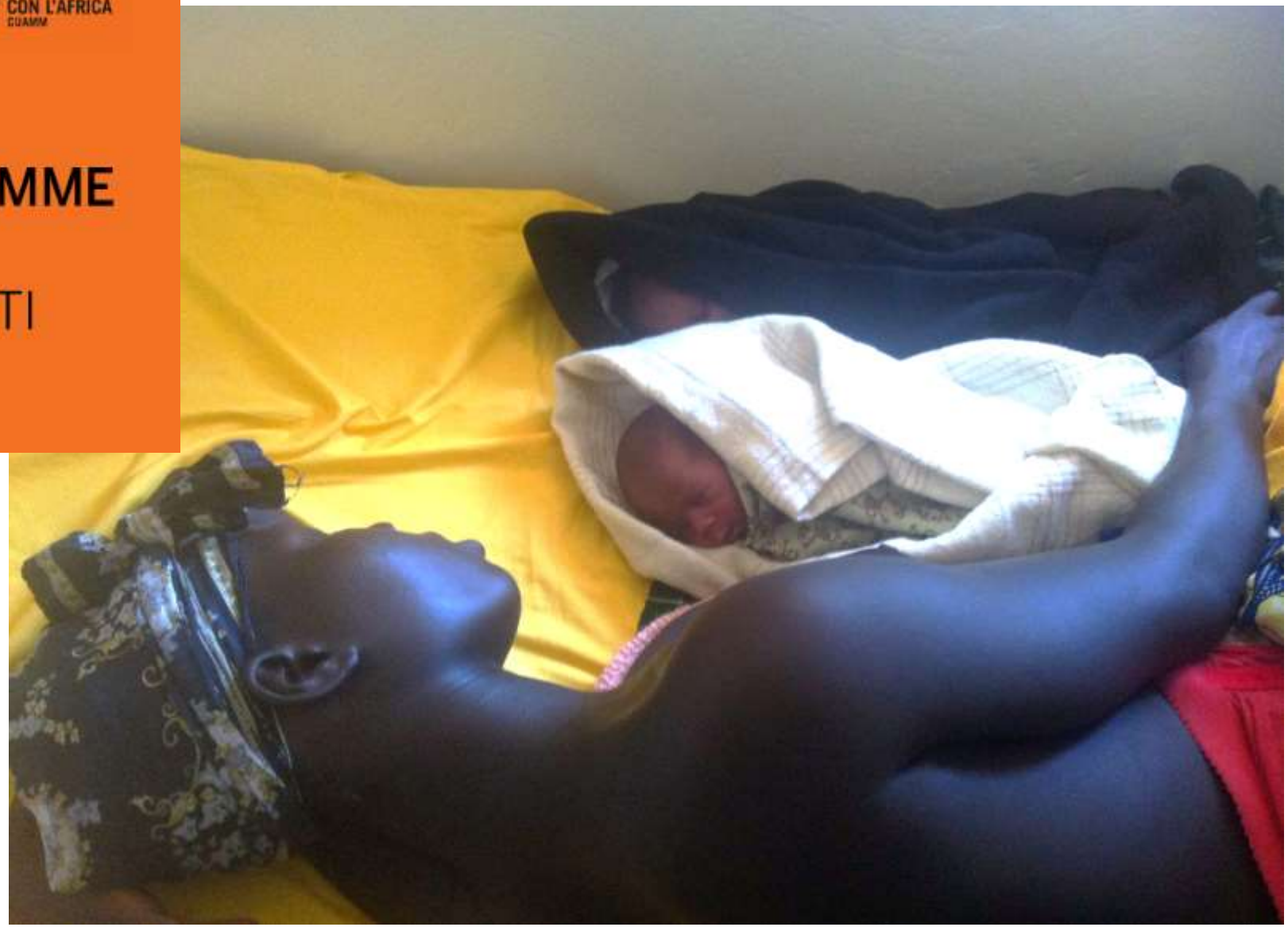
_____ _____

_____ _____



Centro Salute Globale

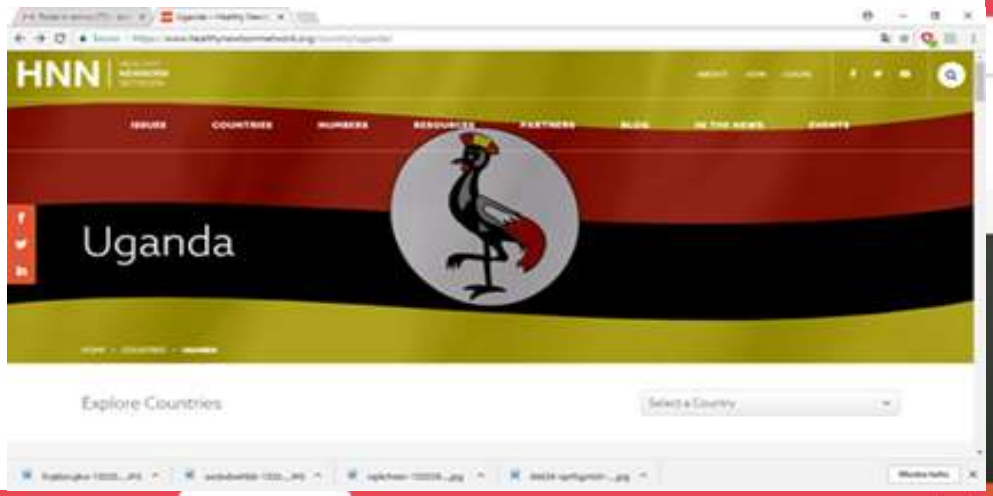
Regione Toscana

SST Servizio Sanitario della Toscana

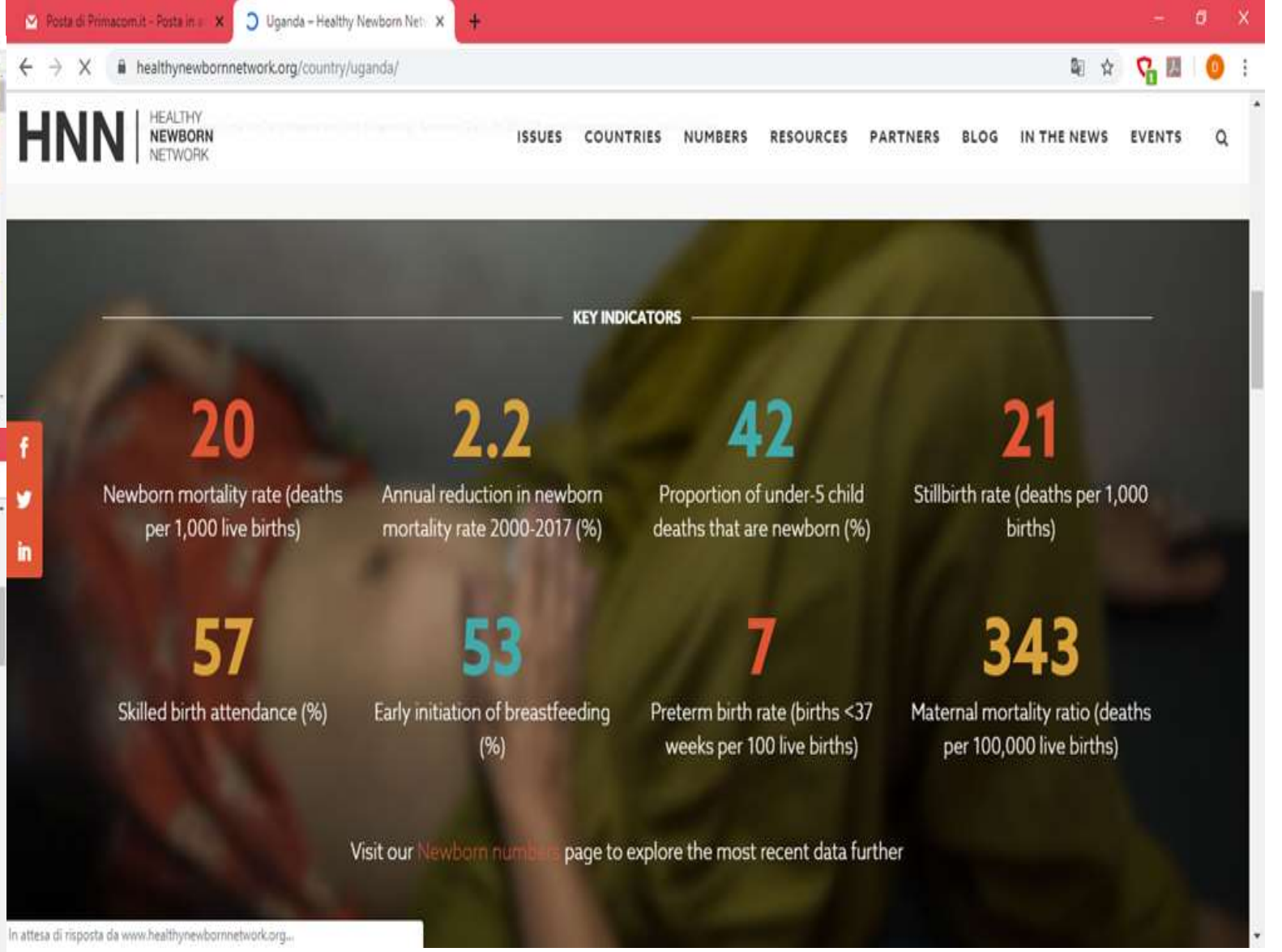
MEYER

Fondazione Meyer Centro Studi


Parc National De La Garamba
Domaine de Chasse de Gangala Na Bodio
Watsa
Lainya
Yei
Torit
Kidepo Game Reserve
Lokichoggio
Kajo Keji
Pajok
A43
Kakuma
A1
Lake Turkana
Kayay
Kitgum
Arua
A104
Lodwar
Gulu
Turkwel
Mahagi
Lira
Obalang
Soroti
Bunia
Lake Albert
Uganda
Mbale
Kitale
Fort Portal
Beni
A109
Kampala
Jinja
Bungoma
Eldoret
Kasese
Entebbe
Parc National des Virunga
Kisumu
Nakuru
Mitoma
Mbarara
Olenguruone
Kisii
Bosta
Migori
Rushenyi
Bukoba
Lake Victoria
Tarime
Distretto di Nyagatare
Musoma

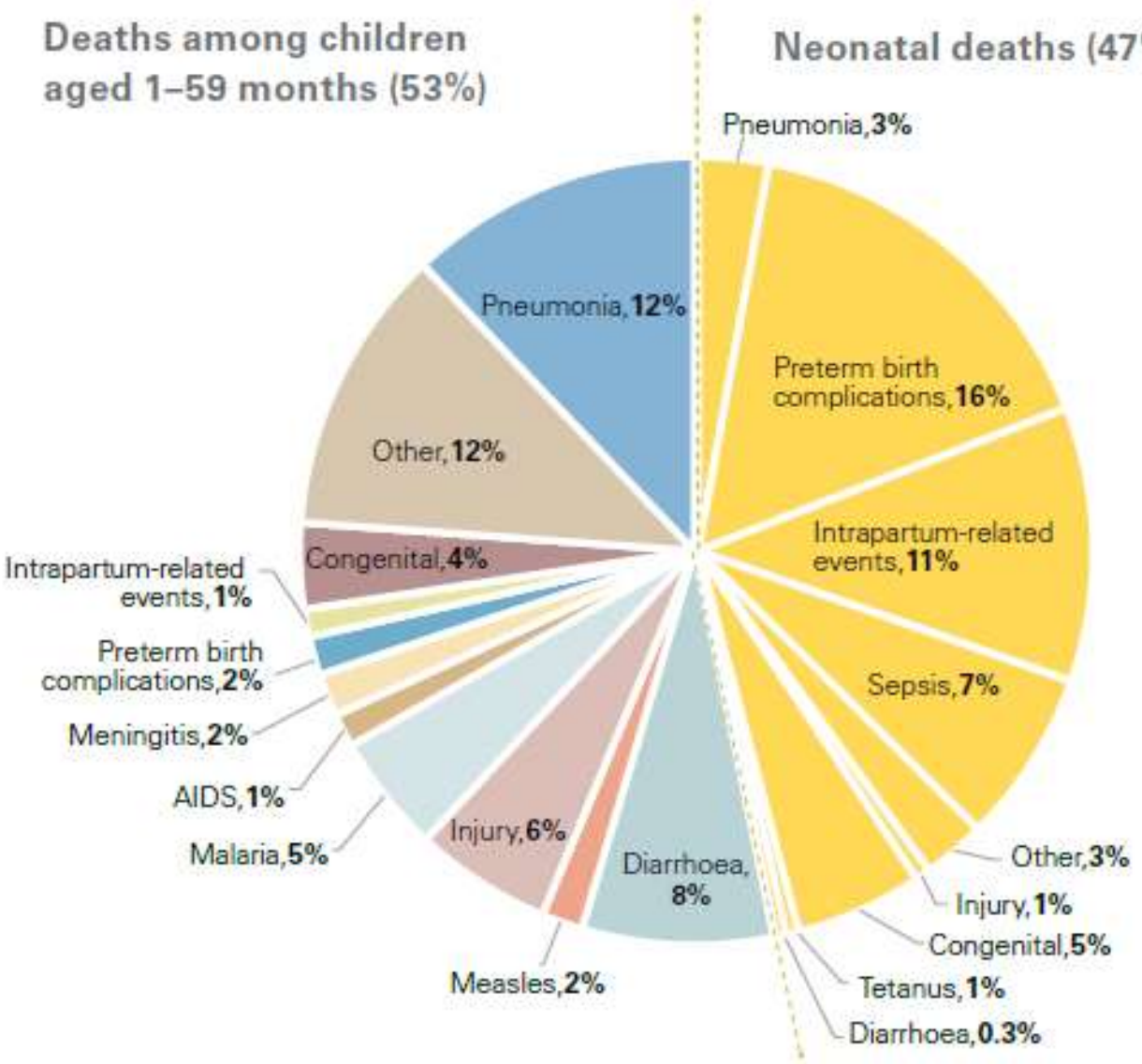

HNN
Uganda
Explore Countries


healthynewbornnetwork.org/country/uganda/
HNN
HEALTHY NEWBORN NETWORK
ISSUES COUNTRIES NUMBERS RESOURCES PARTNERS BLOG IN THE NEWS EVENTS
LEADING CAUSES OF NEONATAL DEATHS IN UGANDA (2017)
27% Preterm birth complications
29% Intrapartum related events
17% Sepsis | tetanus
12% Congenital abnormalities
0% Diarrhoea
7% Pneumonia
8% Other conditions


Uganda – Healthy Newborn Net
healthynewbornnetwork.org/country/uganda/
HNN
HEALTHY NEWBORN NETWORK
ISSUES COUNTRIES NUMBERS RESOURCES PARTNERS BLOG IN THE NEWS EVENTS
KEY INDICATORS
20
Newborn mortality rate (deaths per 1,000 live births)
2.2
Annual reduction in newborn mortality rate 2000-2017 (%)
42
Proportion of under-5 child deaths that are newborn (%)
21
Stillbirth rate (deaths per 1,000 births)
57
Skilled birth attendance (%)
53
Early initiation of breastfeeding (%)
7
Preterm birth rate (births <37 weeks per 100 live births)
343
Maternal mortality ratio (deaths per 100,000 live births)
Visit our Newborn numbers page to explore the most recent data further
In attesa di risposta da www.healthynewbornnetwork.org...

Cause di morte nei i bambini ≤ 5 anni «report 2019»

A. Global distribution of deaths among children under age 5, by cause, 2018



PERIODO NEONATALE
(0 -28 giorni)

47%

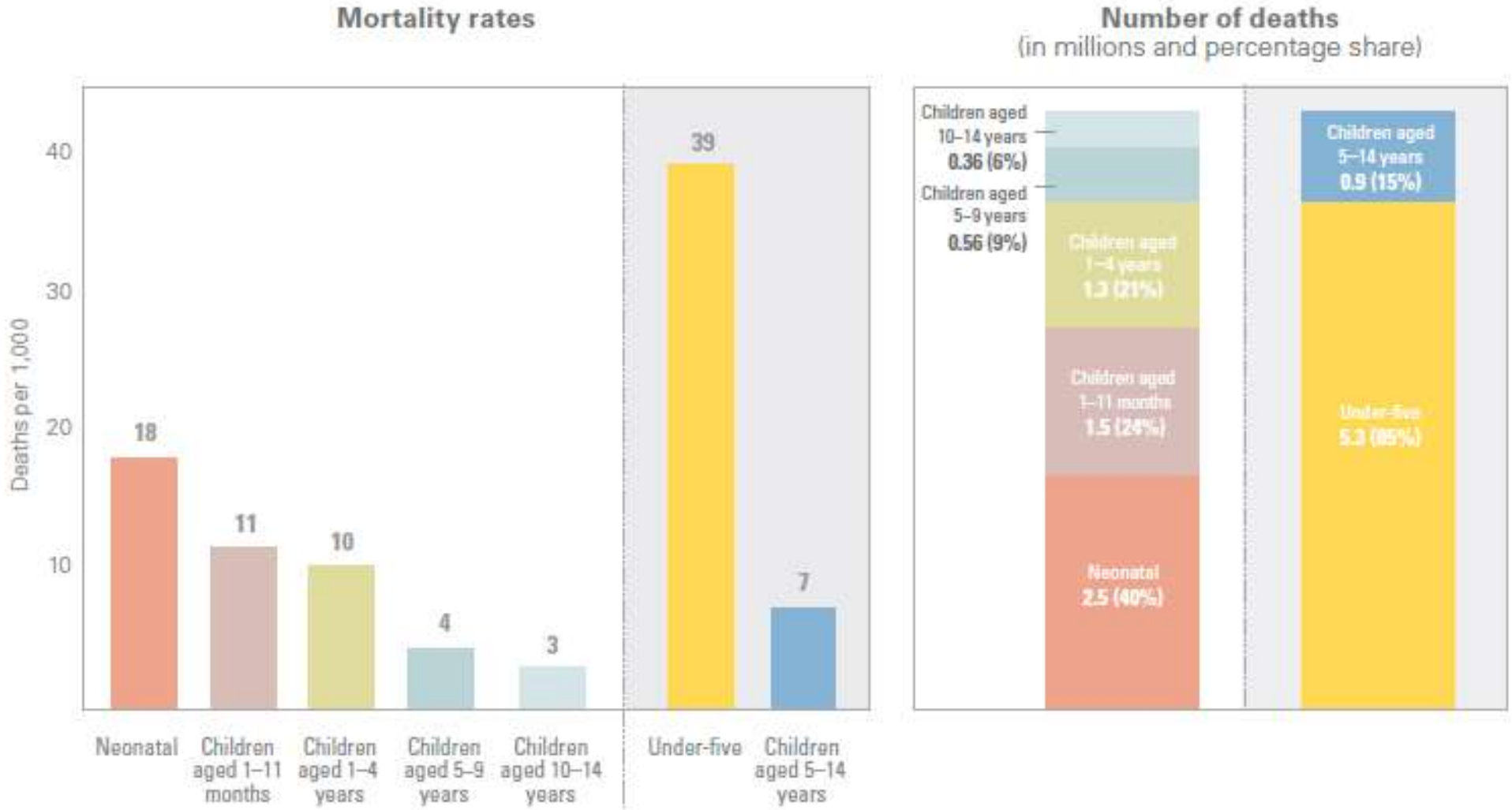
delle morti ≤ 5 anni

unicef

FIGURE 1

In the first month, the mortality risk is the highest

Global mortality rates and number of deaths by age, 2018

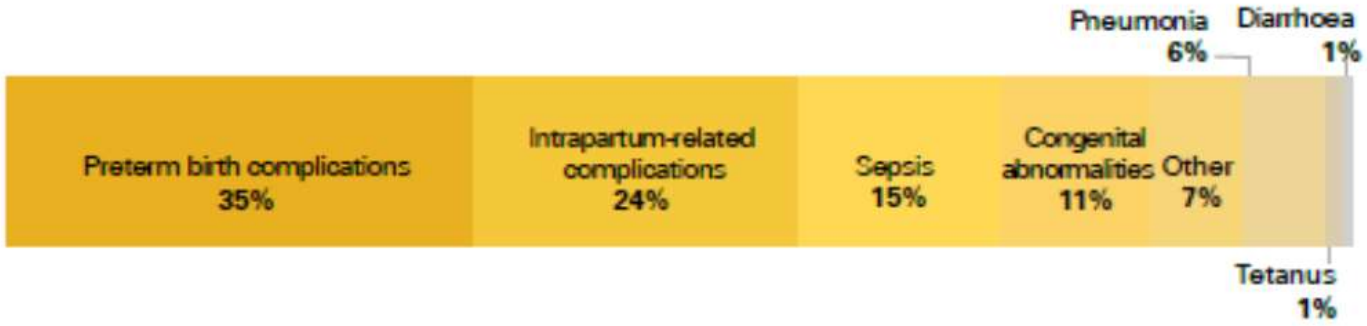


Note: All figures are based on unrounded numbers.

Cause di morte dei 2,5 milioni di Neonati/2018

“7.000 neonati al giorno”

B. Global distribution of newborn deaths by cause, 2018



Note: Estimates are rounded and therefore may not total 100 per cent.

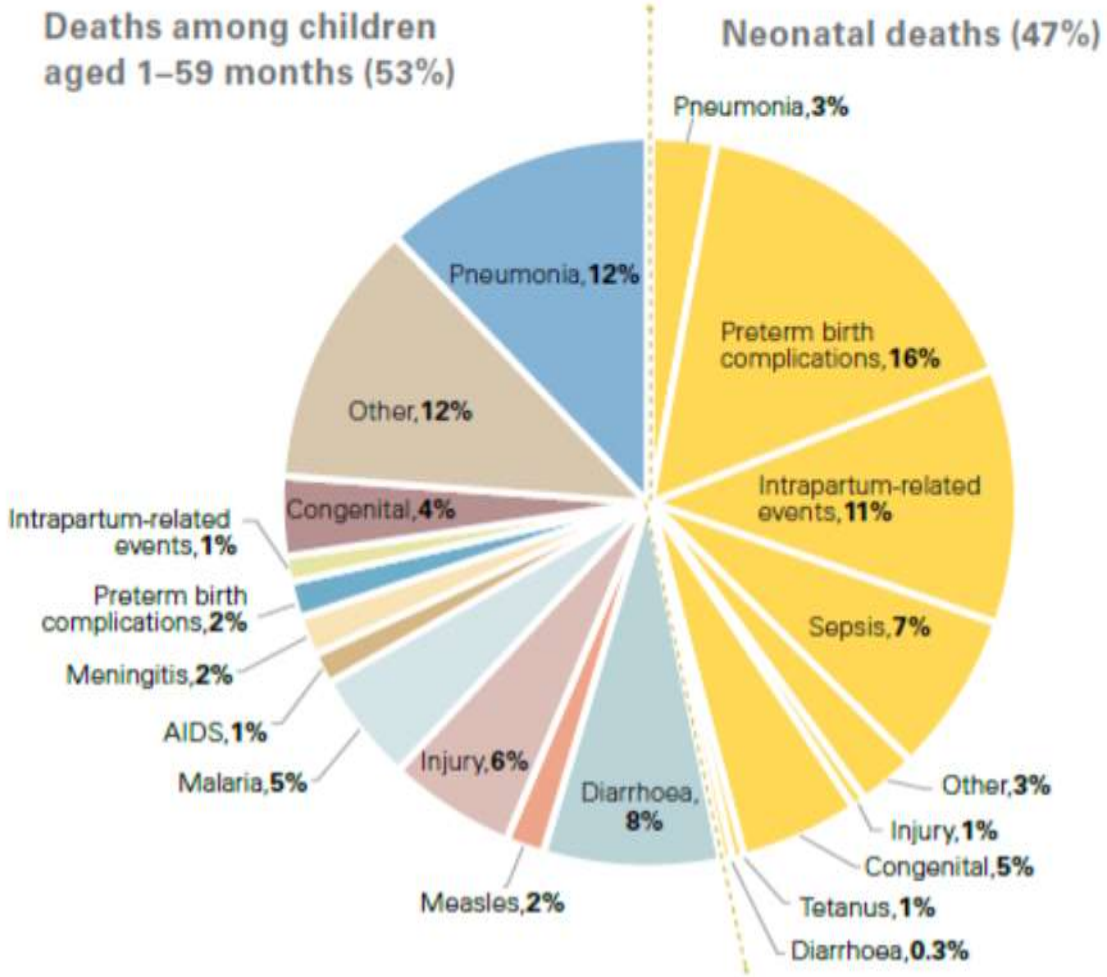
Source: WHO and Maternal and Child Epidemiology Estimation Group (MCEE) interim estimates produced in September 2019, applying cause fractions for the year 2017 to UN IGME estimates for the year 2018.

Hypothermia

Malnutrizione
50%

FIGURE 8 **Infectious diseases remain a leading cause of death among children under age 5**

A. Global distribution of deaths among children under age 5, by cause, 2018



PREMATURE BIRTH

15 million babies are born too soon every year.

CRISIS

Premature birth kills **1 baby** every **30 seconds**.

More children die

as a result of being born too soon than from AIDS, malaria or diarrhea.

The survival gap

Where you are born makes a big difference in your chances of surviving premature birth.

High-income countries: **10% die***

Low-income countries: **90% die***

CARE

More than 75% of deaths can be prevented even without intensive care.

Warmth
Skin-to-skin holding and swaddling help babies stay warm.

Nutrition
Early and exclusive breastfeeding is best.

Breathing
At $1 per shot, steroids help babies' lungs mature in the womb.

Hygiene
A clean environment helps reduce the risk of infections.

Protection
Sunflower oil protects babies' skin and prevents infections.

PREVENTION

STOP babies from being born too soon.

SHARE this message.

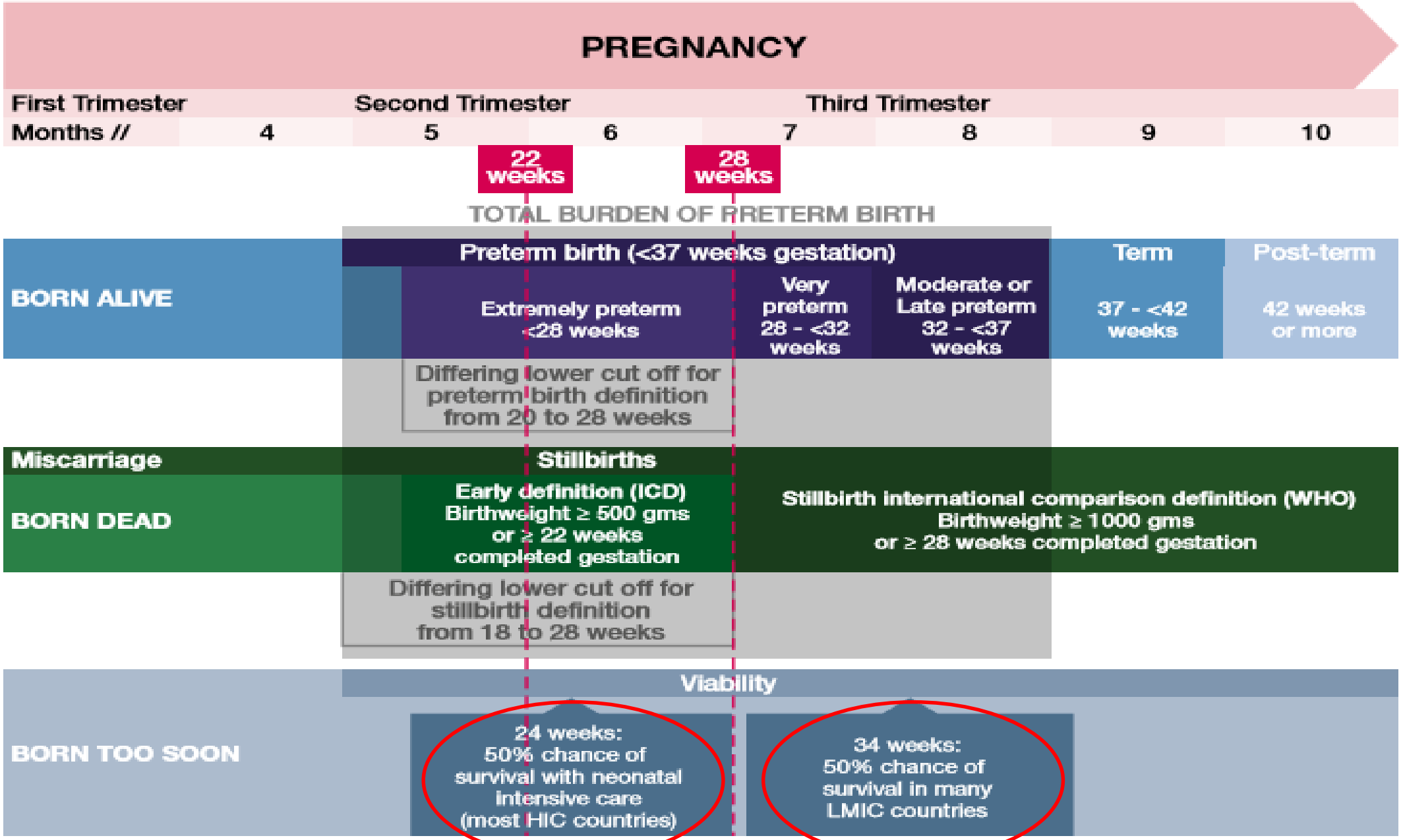
- Raise awareness
- Educate girls and women
- Educate front-line workers
- Equip clinics
- Fund research

facebook.com/worldprematurityday

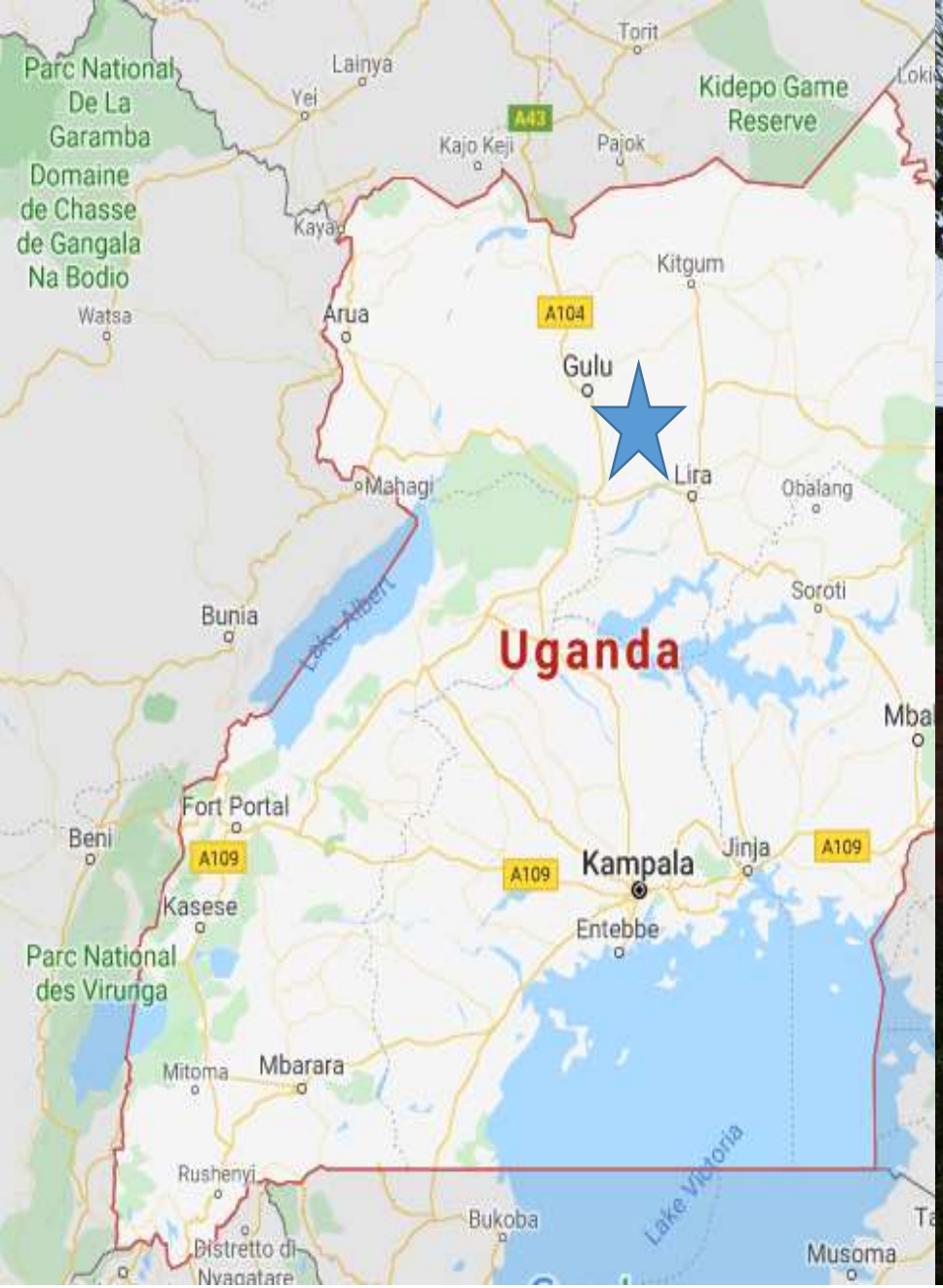
*Sources:
Blencowe H, Cousens S, Oestergaard MZ, et al. National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications. Lancet. 2012; 379(9832):2162-72.
Liu L, Oza S, Hogan D, et al. Global, regional, and national causes of child mortality in 2000-13, with projections to inform post-2015 priorities: an updated systematic analysis. Lancet. 2015; 385(9966):430-40.

march of dimes

Figure 2.2: Overview of definitions for preterm birth and related pregnancy outcomes



Source: Adapted from Blencowe et al. National, regional and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications
World Bank income groupings: HIC=High-Income Countries LMIC=Low and Middle Income available from http://data.worldbank.org/about/country-classifications/country-and-lending-groups


Torit
Parc National De La Garamba
Lainya
Yei
A43
Kidepo Game Reserve
Kajo Keji
Pajok
Domaine de Chasse de Gangala Na Bodio
Kaya
Kitgum
Watsa
Arua
A104
Gulu
Lira
Mahagi
Obalang
Soroti
Bunia
Lake Albert
Uganda
Fort Portal
Beni
A109
A109
Kampala
Jinja
A109
Kasese
Entebbe
Parc National des Virunga
Mitoma
Mbarara
Rushenyi
Bukoba
Lake Victoria
Musoma
Distretto di Nyagatare


POPE JOHN'S HOSPITAL
ABER
P. O. BOX 310, LIRA
24 HOUR EMERGENCY

Il Percorso al PJHA in Uganda (2012/2019)…..ENC–ChNC / KMC/ oltre la Golden Hour

Formazione/condivisione

Essential New born care

Extra newborn care

Neonatal resuscitation

Protocolli/documentazione clinica

Kangaroo Mother Care

Danger Signs

Babies Metric

Indicatori di qualità delle cure

…….

Neonatal mortality rate (deaths under 28 days per 1,000 live births)

England & Wales
USA

Innovation/ introduction

Wide-scale use

Neonatal deaths per 1,000 live births

40
30
20
10
0

1900
1940
1950
1960
1970
1980
1990
2000
2010

Hospital births outnumber home births

First ultrasound machine

First successful in vitro fertilisation

Increasing multiple births

Increasing caesarean rate affects late preterm births

Obstetric practice

Incubator exhibited, but not used clinically

Wide-spread incubator use

First RCTs demonstrating effectiveness vs. RDS

Kangaroo mother care "invented" by Edgar Rey

Newborn thermal care

Infant formula introduced

Gavage feeding introduced; delayed early feeding practice

Adverse effects of delayed feeding recognized, practice reversed and babies fed from birth

Total Parenteral Nutrition (TPN) introduced

Development of special formulas for VLBW infants

Increased focus on breastfeeding support

Addition to formula of long chain fatty acids

Newborn nutritional care

Penicillin introduced

Detailed infections prevention protocols in NICUs

Wider use of broad spectrum antibiotics

Antibiotics and infections management

Surfactant described, isolated; Avery & Mead demonstrate lack of surfactant in preterm lungs

IPPV introduced by Gregory; mechanical ventilators shown to improve survival

Liggins & Howie show ANCS induce lung maturity

Surfactant replacement studied, approved; (TcPO2, pulse ox developed

ANCS as standard for PT labour

Surfactant prophylaxis as standard

CPAP gaining acceptance for 1st line before IPPV

Respiratory complications management

First neonatal unit in USA

First neonatal unit in UK

Newborn care taken up by paediatricians as well as obstetricians

Neonatology sub specialty started

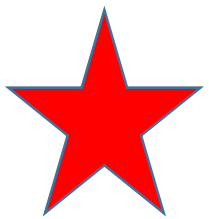
Development of NICU system and specialty of neonatology

Neonatal Transport systematised

Neonatal nurses and nurse practitioners become established

Develop-mental neonatal care

Neonatal intensive care system



Observation Chart for the HEALTHY NEWBORN (IN THE FIRST 24 HOURS)

(to be kept with mother file)

Name of mother:..... Mother's age ..... IP N°.....

Date of Birth:..... Time:..... Sex: M□ F□ GA.....

Delivery: Normal □ CS□ Other□ Meconium stained liquid: Yes □ No□

Birth Weight:..... Apgar Score: 1min..... 5min.....10min.....

BABY

HIV exposed: Yes □ No□

ART started: Yes □ No□

Observation during the 2 FIRST HOURS of life:

			Temperature	Breathing Rate	Heart Rate
Time		30th minute	30th minute	30th minute	30th minute
Time		2nd hour			

Breast feed 1st h.: Yes □ No□

Eye care: Yes □ No□ - VitK: Yes □ No□

TRANSFER DATE TO POSTNATAL ROOM:.....hour:.....

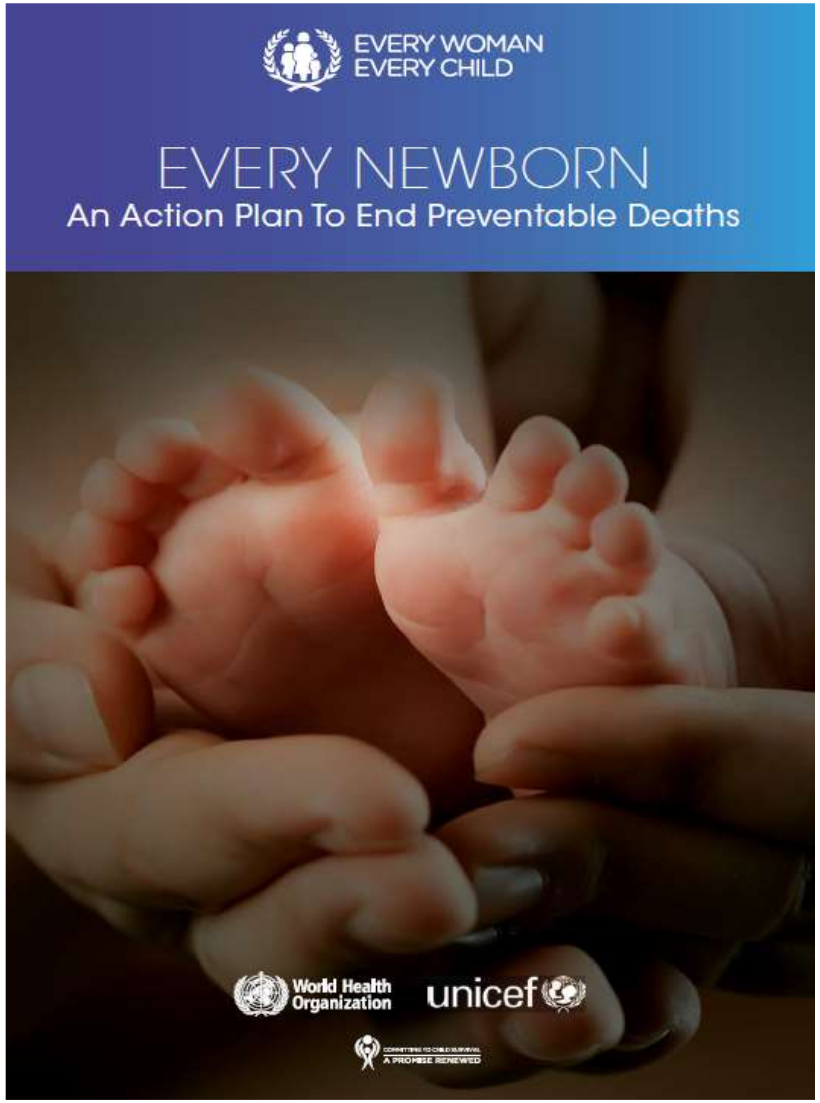
Signature: _____

Monitoring of the Newborn:

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Temperature							
Weight							
Eyes							
Chord							
Tone							
Breathing rate							
Fontanel							
Breastfeed							
Colour							
Urine Stool	Yes □ No□ Yes □ No□	Yes □ No□ Yes □ No□	Yes □ No□ Yes □ No□	Yes □ No□ Yes □ No□	Yes □ No□ Yes □ No□	Yes □ No□ Yes □ No□	Yes □ No□ Yes □ No□
Remarks and malformations							

Immunization Yes □ No□ SCD screening Yes □ No□ DISCHARGE DATE:..... DISCHARGE WEIGHT:.....

Signature: _____



Pope John's Aber Hospital - P.O. Box 310 - Lira - Uganda

Clinical Chart for the SICK NEWBORN (IN THE FIRST 24 HOURS OF ADMISSION)

Name of mother: ..... Mother's age.....

IP N°.....

Date of Birth:..... Date of admission.....Time of admission .....

Sex: M □ F □ GA.....

Place of delivery .....

Delivery: Normal □ CS□ Other□ Meconium stained liquor : Yes □ No□

Birth Weight:..... Weight on Admission.....

Apgar Score: 1min..... 5min.....10min.....

BABY

HIV exposed: Yes □ No□

ART started: Yes □ No□

SICK NEWBORN:

□ Newborn with Apgar score < 6 OR □ Newborn with any Resuscitation: .....

□ Newborn with Risk of sepsis (PROMM > 18 hours, maternal fever, etc...)

□ Newborn with Respiratory Distress syndrome □ Newborn LBW (< 2.5 Kg) □ Birth defect

□ Others.....

MONITORING

Breast feed 1st h.: Yes □ No□

FEEDING PRESCRIPTION ON FIRST DAY OF ADMISSION: □BF x 12,

□ EBM ..... amount x 8 or 12; □ 10%dextrose..... amount x 8-10-12 times

Eye care: Yes □ No□ Vit K: Yes □ No□

Urine: Yes □ No□ Stool Yes □ No□

Weight on discharge from Maternity/on 2nd day admission: .....

Remarks and Malformations:.....

Date	Time	T °C	RR (bpm)	HR (bpm)	RBS (mmol/l)	Rx Low BS Qty of D5%	RDS	SpO2 %		Rx Oxigen (L/min)	Sign
								On O_2	Room Air		
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
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							Yes □ No□				
							Yes □ No□				
							Yes □ No□				
							Yes □ No□				

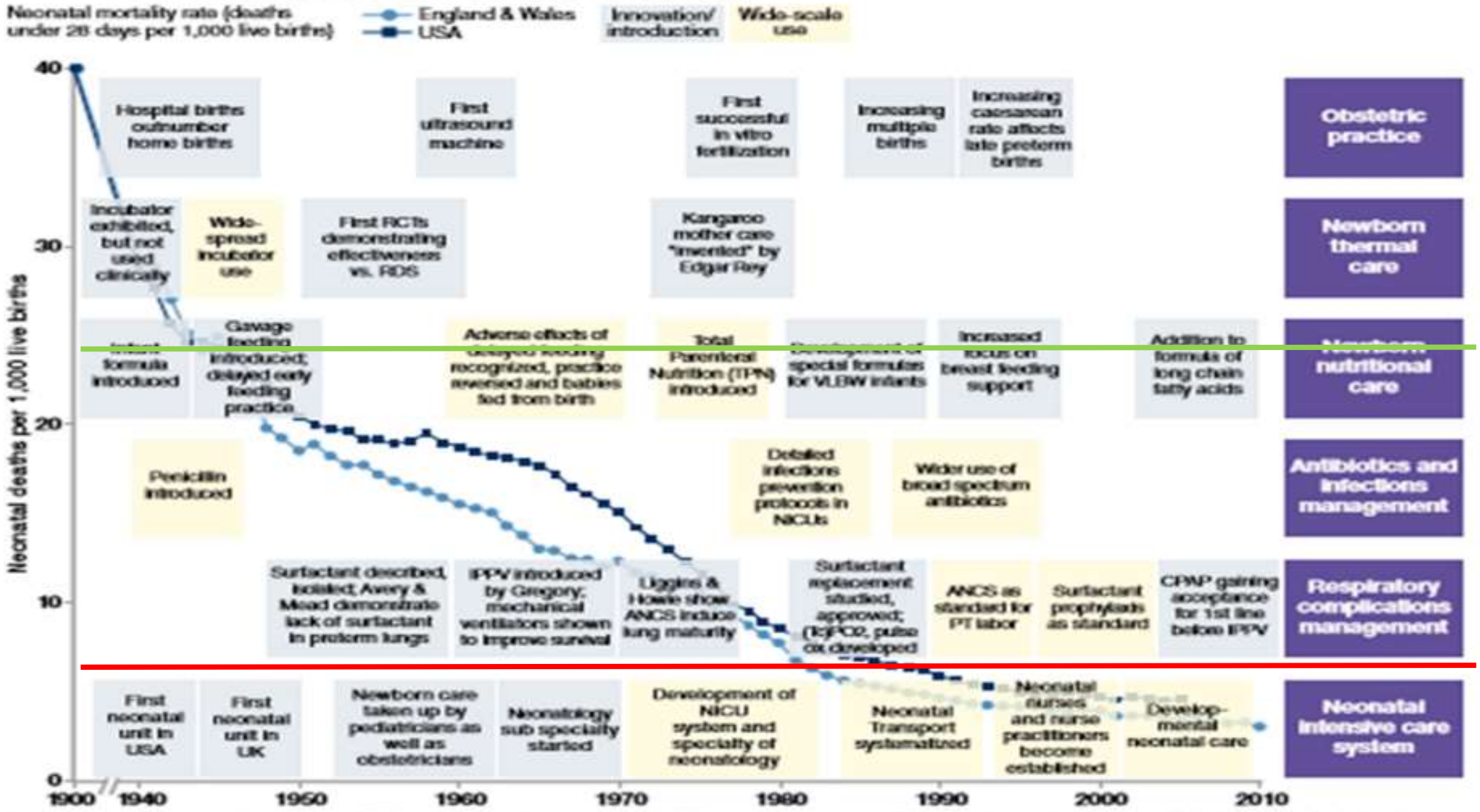
TRANSFER DATE TO PEDIATRIC WARD OR OTHER HOSPITAL: .....hour:.....

Signature: _____

John Pope Hospital Aber

Anno/BW	Sopra 2500 grammi	1500/2499 grammi	Sotto 1500 grammi	NMR	Certezza dati	
2018	45%	25%	30 %	24%°	Si Loro	NBU
2017	45%	30 %	25 %	30%°	SI Verificati	Bridge
2016	54,9%	29,2%	15,7%	36,6%	SI Verificati	Stabilità
2015	44%	35,6%	20,2%	34,8%	SI Insieme	Scossa
2014	43,4%	30,7%	25,7%	51,2%	SI nostra	Evoluzione
2013	49,4%	26,6%	23,9%	49,3%	SI nostra	Inizio

Figure 5.5: The history of neonatal care in the United Kingdom and the United States shows that dramatic declines in neonatal mortality are possible even before neonatal intensive care is scaled up



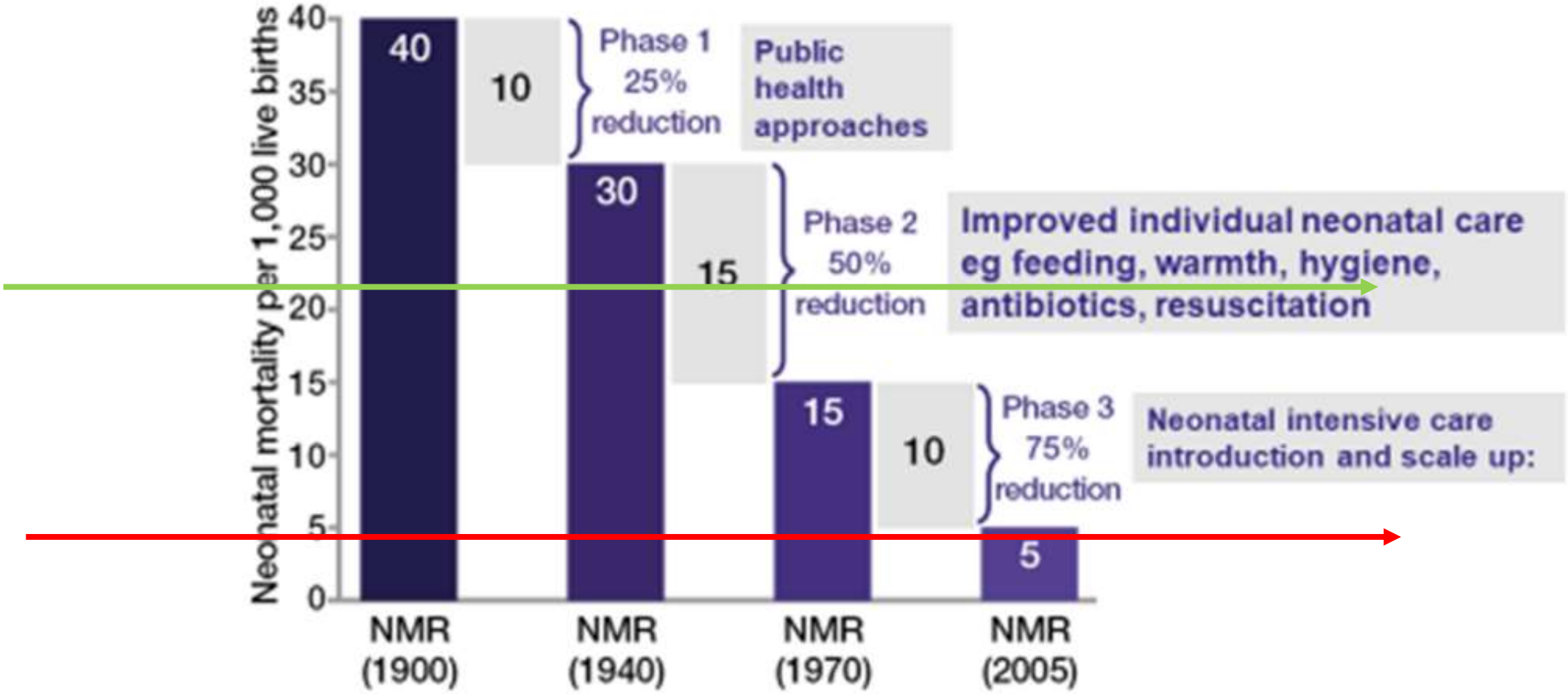
Acronyms used: ANCS – antenatal corticosteroids, CPAP – continuous positive airways pressure, NICU – neonatal intensive care, IPPV – intermittent positive pressure ventilation, VLBW – very low birth weigh

Sources: (Smith et al., 1993; NIH, 1985; Baker, 2000; Wegman, 2001; Philip, 2005; Jarrahian et al., 2006; Lindauer and Farewell, 2006; CDC, 2012; Office for National Statistics, 2013) with thanks to Boston Consulting Group

LIC

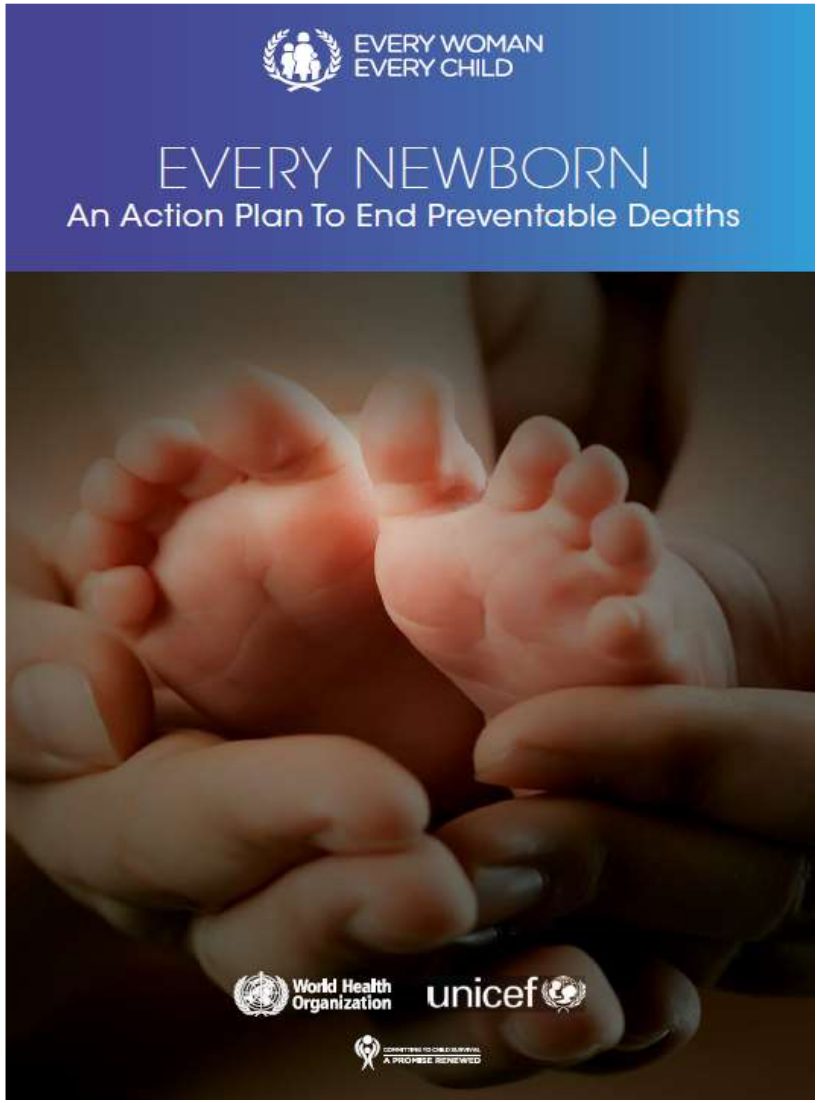
HIC

Premature babies can be saved before intensive care is available...



Over 60% reduction can be achieved before neonatal intensive care and history shows the impact would be huge

Data sources for UK and US historical data: (CDC, 2012, Office for National Statistics, 2012, NRI, 1985, Smith et al., 1983, Jamison et al., 2006, Lassauer and Fenaroff, 2006, Baker, 2000, Phillip, 2005, Wegman, 2001). With thanks to Boston Consulting Group


EVERY WOMAN
EVERY CHILD
EVERY NEWBORN
An Action Plan To End Preventable Deaths
World Health Organization
unicef
COMMITTING TO CHILD SURVIVAL
A PROMISE RENEWED

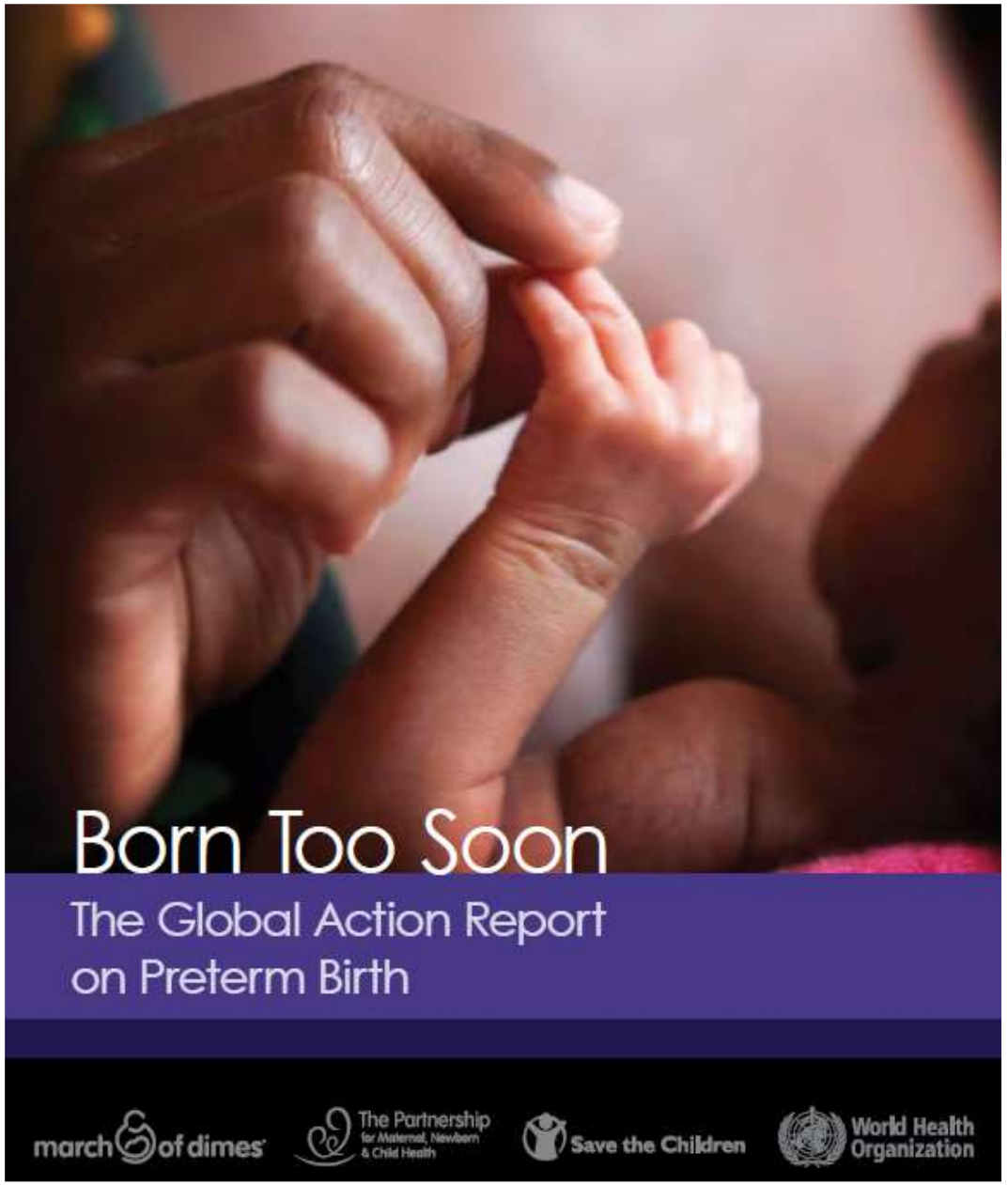
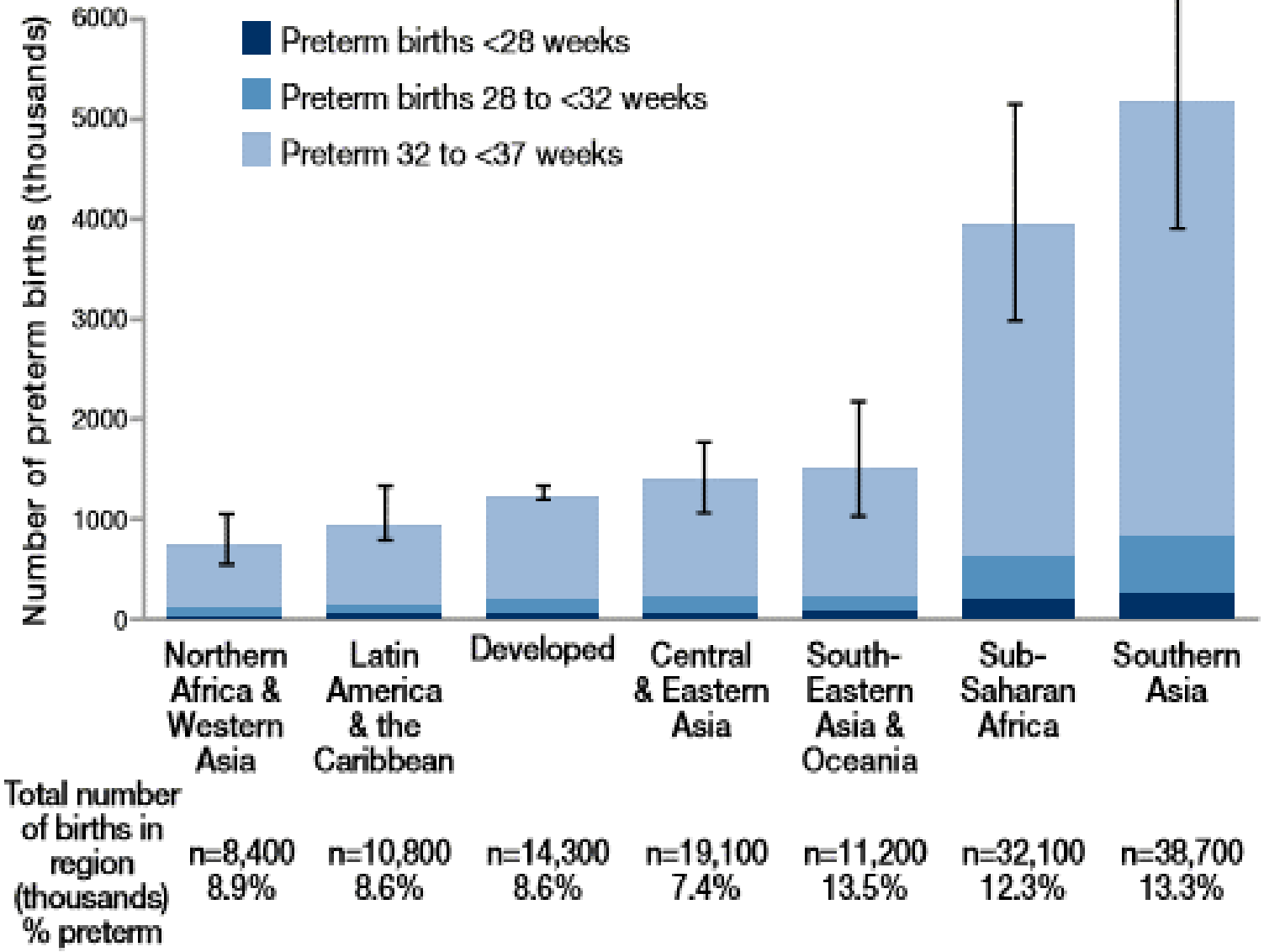

Born Too Soon
The Global Action Report
on Preterm Birth
march of dimes
The Partnership
for Maternal, Newborn
& Child Health
Save the Children
World Health
Organization

Figure 1: Preterm births by gestational age and region for 2010



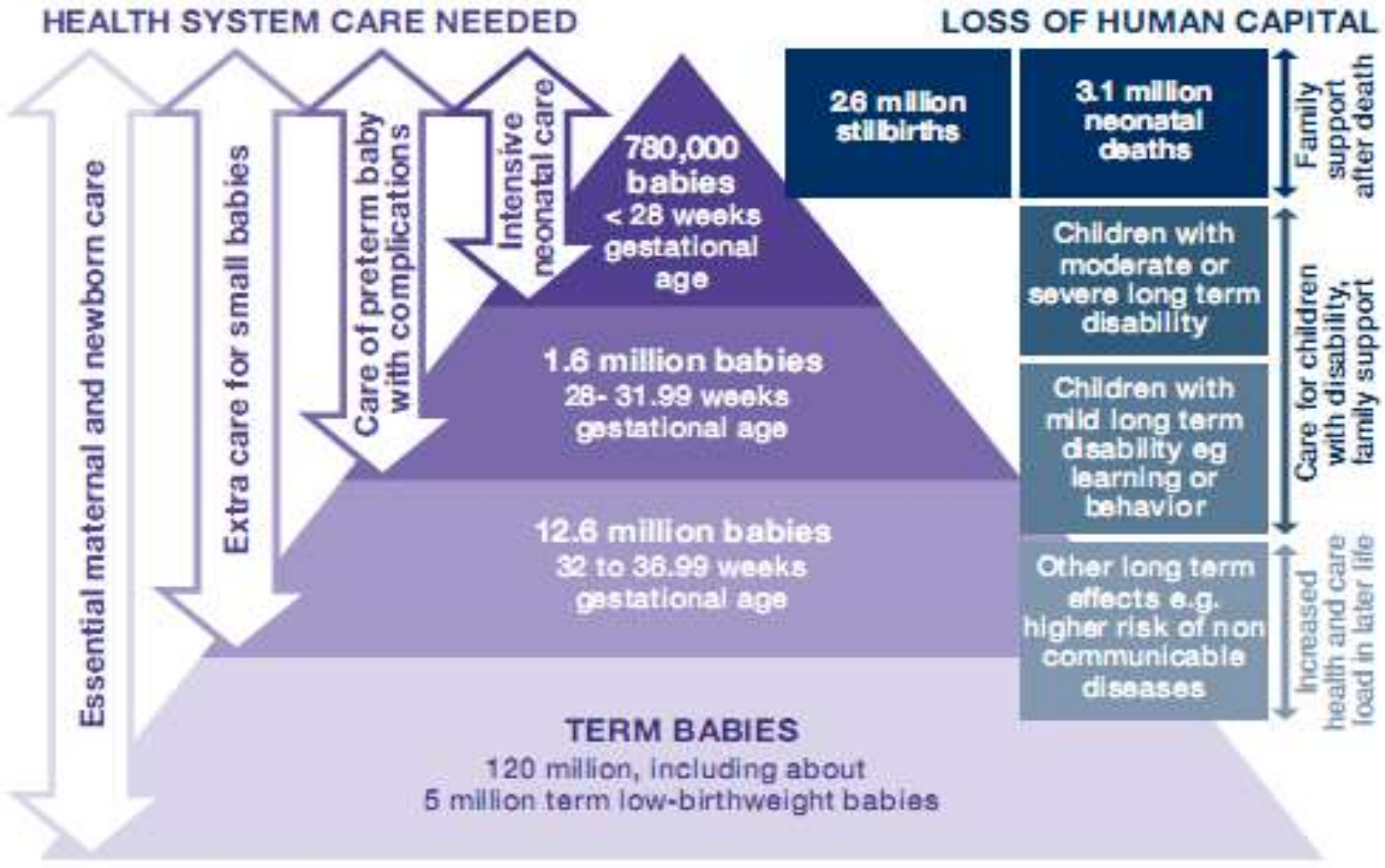
Based on Millennium Development Goal regions.

Source: Blencowe et al National, regional and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications

Preterm birth by the numbers:

- 15 million preterm births every year and rising
- 1.1 million babies die from preterm birth complications
- 5-18% is the range of preterm birth rates across 184 countries of the world
- >80% of preterm births occur between 32-37 weeks of gestation and most of these babies can survive with essential newborn care
- >75% of deaths of preterm births can be prevented without intensive care
- 7 countries have halved their numbers of deaths due to preterm birth in the last 10 years

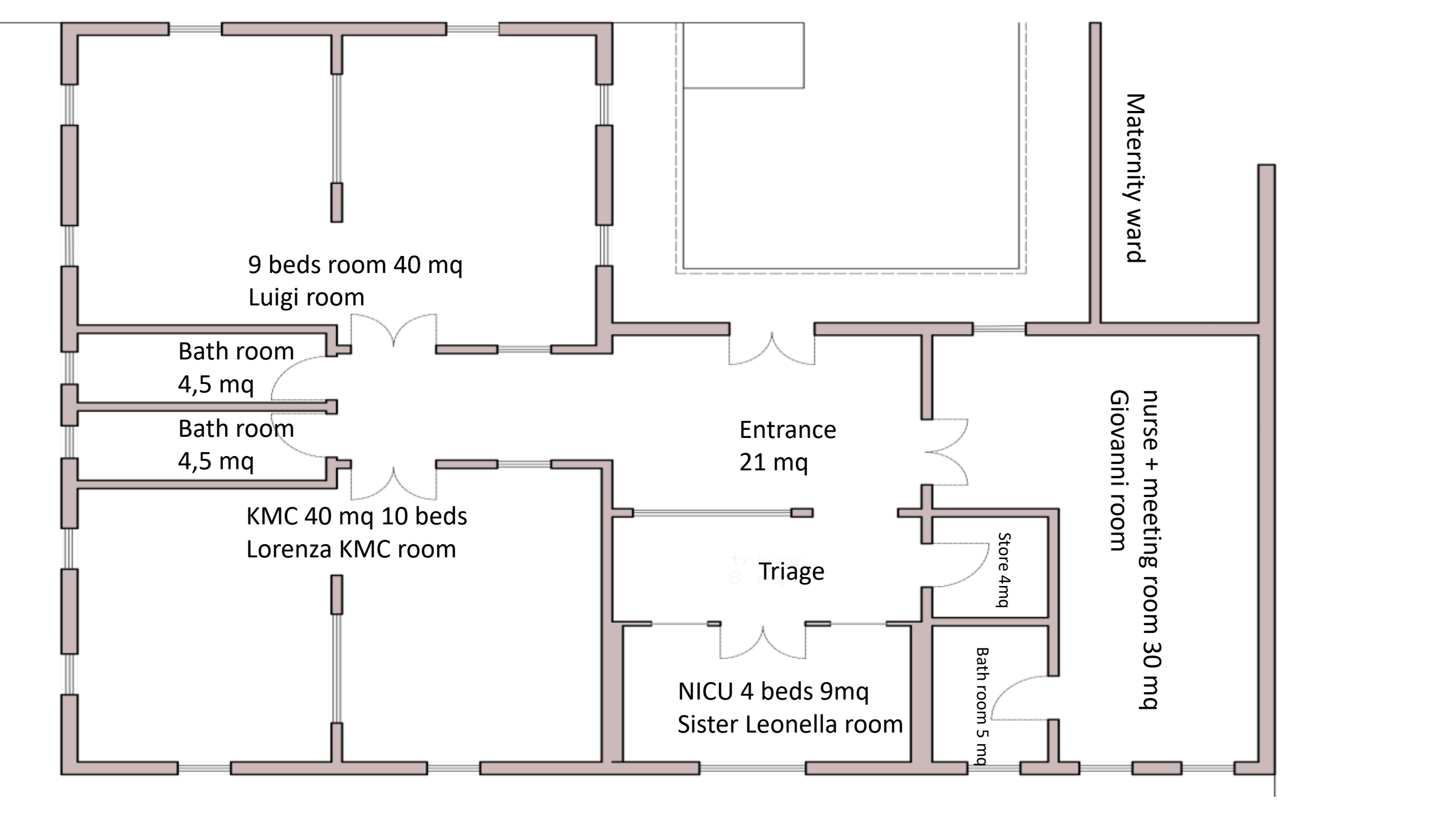
Figure 5.2: 135 million newborns and 15 million premature babies - health system needs and human capital outcomes

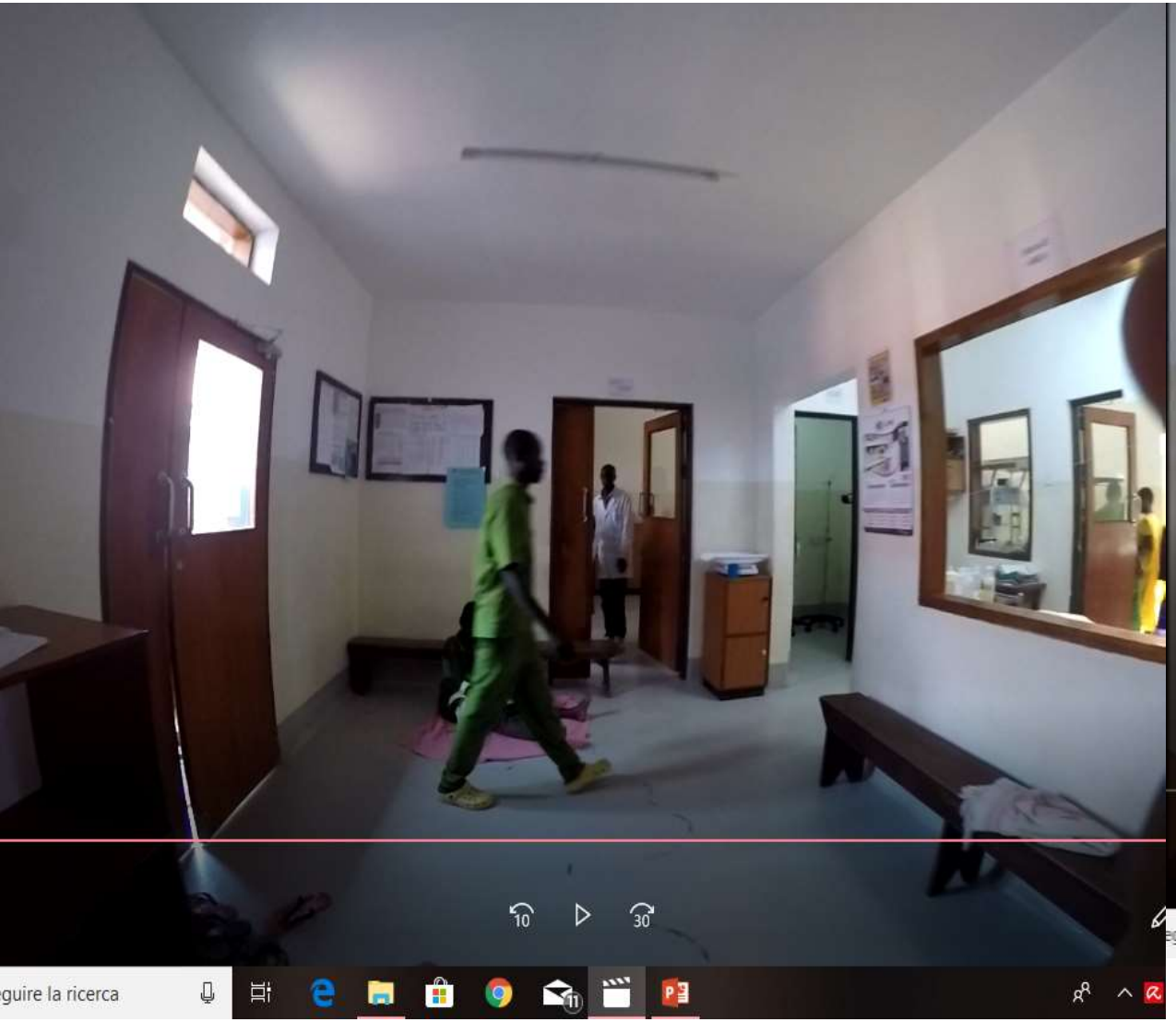


Source: Analysis using data from Blencowe et al., 2012; Cousens et al., 2011; Liu et al., 2012

Figure 5.1: Worlds apart: the four settings where 15 million preterm babies receive care

Inaugurazione Neonatal Unit at Aber Hospital Agosto 2018


9 beds room 40 mq
Luigi room
Bath room
4,5 mq
Bath room
4,5 mq
KMC 40 mq 10 beds
Lorenza KMC room
Entrance
21 mq
Triage
NICU 4 beds 9mq
Sister Leonella room
Store 4mq
Bath room 5 mq
Maternity ward
nurse + meeting room 30 mq
Giovanni room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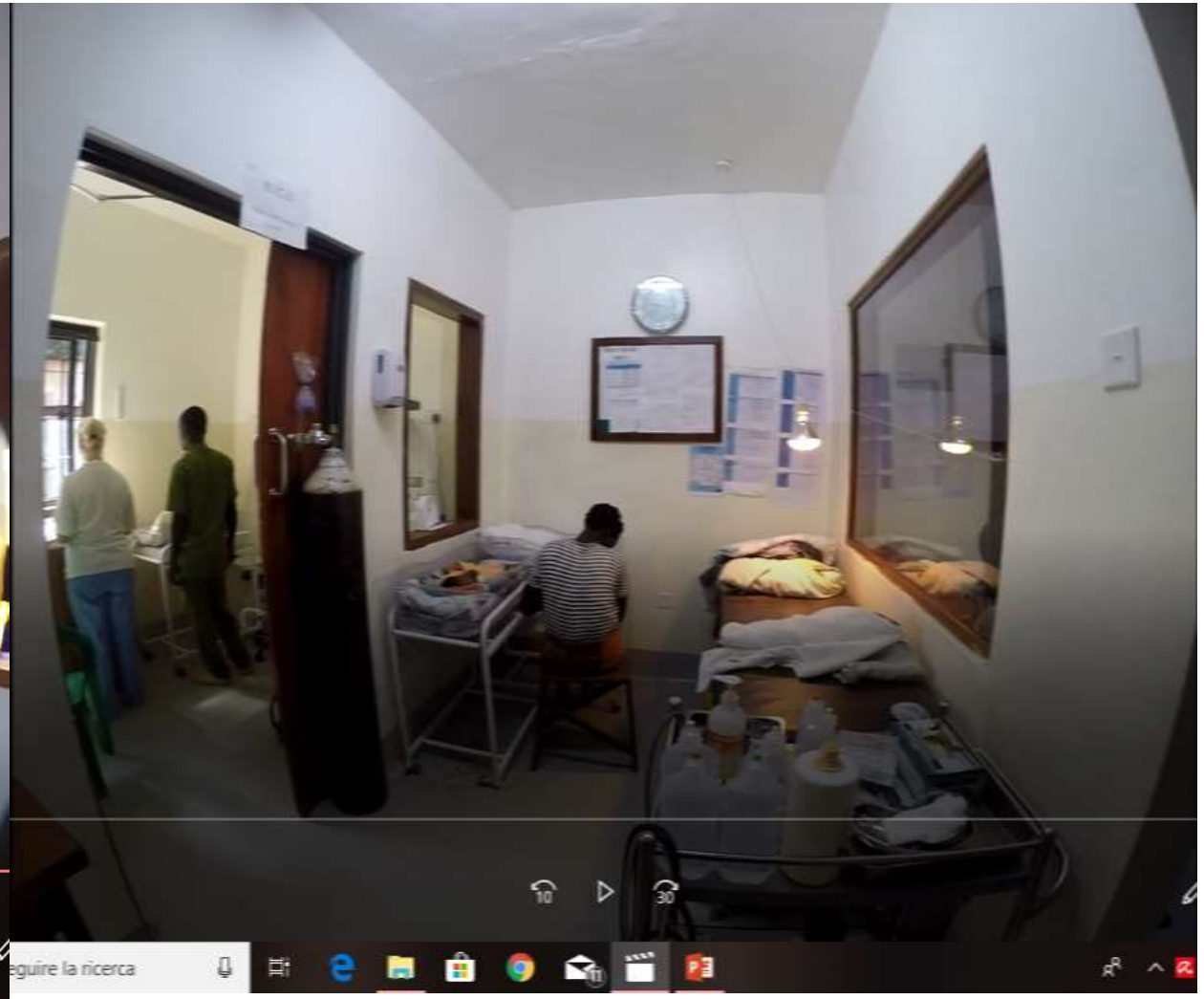
guire la ricerca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SUMMARY OF DEATH IN THE NEONATAL UNIT							
	2014	2015	2016	2017	2018	2019	2020
Total No. of deaths	85	113	165	143	143	47	
VENND	35	47	74	68	53	23	
ENND	41	51	60	57	62	22	
LNND	9	15	31	18	28	4	
Born out	47	71	91	73	78	20	
Born in	34	42	70	67	65	21	
Prematurity	50	62	95	68	69	23	
Others	35	51	70	49	51	18	
Referrals in	30	37	62	79	113	19	
Total admissions	433	549	791	617	570	274	
Total Born in	N/A	0	264	258	312	153	
Total Born Out	N/A	0	240	214	267	121	

2017

BWT(gm)	VENND	ENND	LNND	TOTAL
<1500	15	21	11	47
1500-2499	16	11	5	32
>2500	35	22	2	62
TOTAL	67	57	18	143

2018

BWT(gm)	VENND	ENND	LNND	TOTAL
<1500	15	24	18	57
1500-2499	10	12	3	25
>2500	28	26	7	61
TOTAL	53	62	28	143

2019

BWT(gm)	VENND	ENND	LNND	TOTAL
<1500	4	6	2	12
1500-2499	5	8	1	14
>2500	14	6	1	21
TOTAL	23	20	4	47

What is Kangaroo Mother Care?

- Kangaroo Mother Care (KMC) is care of newborn infants secured skin-to-skin to the mother

- KMC is a powerful and easy to use method to promote the health and well-being of

  - Low birth weight (LBW) - infants with birth weight below 2500g
  - Preterm infants – infants with gestational age less than 37 weeks
  - Also term infants

WHO KMC practical guide

PEP unit 43 Principles of KMC

Reasons Why KMC was Implemented

- In 1979 Dr Edgar Rey & Hector Martinez worked in Bogotá, Colombia

- Circumstances at the hospital where they worked
  - Large numbers of LBW & preterm infants delivered because of:
    - Poor Ante Natal Care attendance
    - High incidence of toxaemia of pregnancy, anaemia & infections
  - Shortages of staff & inadequate equipment
  - High infection & mortality rate because of overcrowding
  - Large numbers of infants who were abandoned by their mothers

    Whitelaw A and Sleath K, 1985

KMC can be continuous or intermittent

Continuous KMC:

- Takes place when the baby is in the skin to skin position for 24minimum of 20hrs to as close to 24 hours every day (except for very short periods e.g. when the mother has to bath or use the toilet).

Intermittent KMC:

- The baby is put skin to skin contact for a few hours each day.
- When not in KMC position the baby is kept warm in an incubator or is warmly wrapped.
- Mostly used for very small and sick babies and /or for mothers who do not want, or are not yet ready or able to practice continuous KMC.

The mother or other family members such as father, grandmother, aunts and older siblings can do KMC.

3.2.1. Admission criteria for the baby

It is recommended that all babies less than 2500g should be initiated on KMC as the mother is transferred from the labour ward to the post-natal ward.

I. <u>Eligibility for admission into KMC by birth weight</u>

- All stable babies born **below 2500g** should be started on KMC
  - Stable babies **between 2000g and 2500g** should be evaluated by a health worker, the mother counselled on KMC, the baby initiated and discharged on KMC
  - All stable babies **below 2000g** should be admitted into a KMC unit and started on KMC
    - Stable babies weighing between **1800g and 2000g** can be started on KMC soon after birth
    - Babies weighing **between 1200g and 1799g** should be stabilized then started on KMC as soon as possible
    - Babies weighing **less than 1200g** should be transferred immediately to a centre that can offer intensive neonatal care. It may take weeks before their condition allows the initiation of KMC. Depending on the facilities available for the transfer, KMC can be utilised to keep the baby warm during the transfer to the higher level facility.

The table below lists the benefits of KMC to the baby, the mother and the health facility

Baby	Mother/care giver	Facility
Improved cardiac and respiratory stability	The mother's confidence in caring for her infant is boosted	Significant cost-savings as well as
KMC can successfully treat mild respiratory distress	Improved bonding between mother and infant due to the physical closeness between them	Less dependence on incubators
Improved gastrointestinal function	Mothers are empowered to play an active role in their infants care	Additional nursing staff not required (compared to incubator care)
Higher initiation & duration of breastfeeding	Mothers are enabled to become the primary care giver of their infants	Shorter hospital stay
Low energy expenditure & satisfactory weight gain	Breast feeding is promoted which has benefits for both mother and baby	Improved morale & quality of care
Protection against nosocomial infections		Better survival
Better thermoregulation		
Infants are less stressed and this provides neurological protection to the infant		

3.8. Monitoring of babies admitted into the KMC unit

For this the KMC Unit Feeding and Observation Chart in Annex 2 should be used

- Monitor vital signs (respiratory rate, pulse rate, temperature) 3 hourly
- Record feeds given as per the schedule used
    - Monitor growth by taking daily weight of the baby. Target a daily weight gain of 15g/kg/day after regaining birth weight. Birth weight is regained within 14 days after birth. If weight gain is not adequate assess possible causes such as inadequate amount and frequency of feeds, inadequate skin to skin contact and signs of infection

3.9. Immunisation

Immunise all babies soon after birth, according to the National Immunisation schedule and guidelines.

N.B: Prematurity/low birth weight is not a contraindication for immunisation.

La storia continua…….

Take home message

- Conoscenza personale sull'argomento
- Analisi contesto attraverso raccolta dati per identificare strategie di miglioramento valutate da indicatori
- Conoscenza e rispetto delle linee guida nazionali e standards WHO
- Graduale e Condivisa introduzione di nuove metodiche
- Condivisione continua e verifica dei risultati
- Sinergia tra I Partners del progetto

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