Contextualising prematurity

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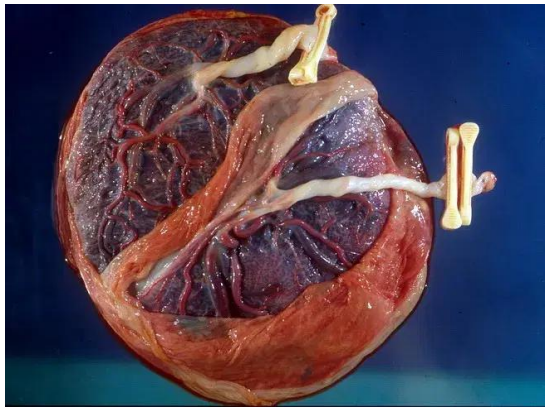
Chair, Committee on Health Systems Strengthening and Respectful Care – FIGO
Academic Committee – ISUOG
Cartagena de Indias, Colombia



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FIGO International Federation of Gynecology and Obstetrics

isuog.org

Where Are the World's Babies Born?

High income countries
~10 million

Upper middle income countries
~40 million

132 million live births in 2024
~30 million
Need special newborn care

Low and middle-income countries

Ohuma EO, et al. Lancet 2023; 402: 1261–71

13,4 million babies born too soon (preterm)

Preterm Birth: The Modern Challenge of Obstetrics

Percentage

100

Number (Thousands)

200

those who
t day of life

Number of live births

Birth

Gestational age

Survival gap

90%

10%

Over 90% of extremely preterm babies (<28 weeks) born in high income countries survive yet less than 10% of these babies survive in low-income settings

Ohuma EO, et al. Lancet 2023; 402: 1261–7
WHO/UNICEF "Born Too Soon" report

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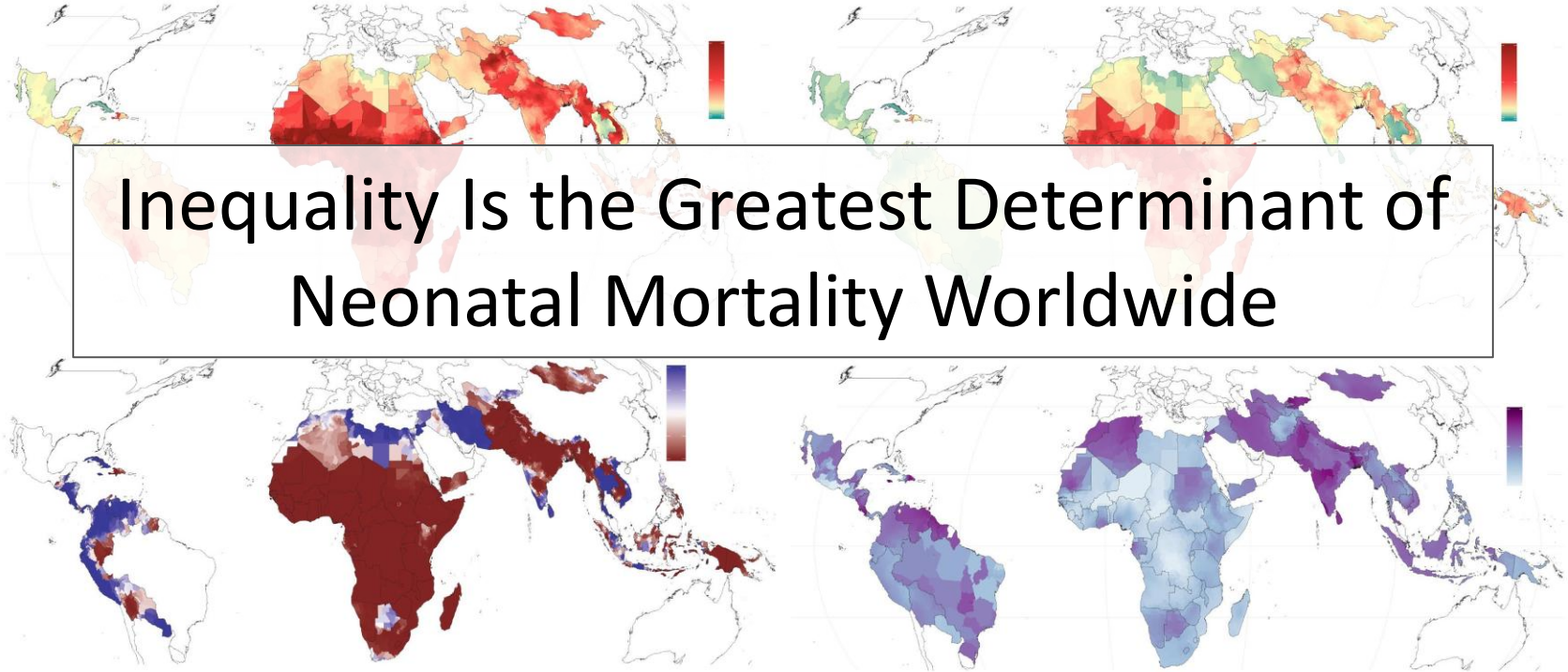
ARTICLE

OPEN
https://doi.org/10.1038/s41586-019-1545-0

nature
International journal of science

Mapping 123 million neonatal, infant and child deaths between 2000 and 2017



Inequality Is the Greatest Determinant of Neonatal Mortality Worldwide

The Obstetric Problem: Different Phenotypes of Preterm Birth

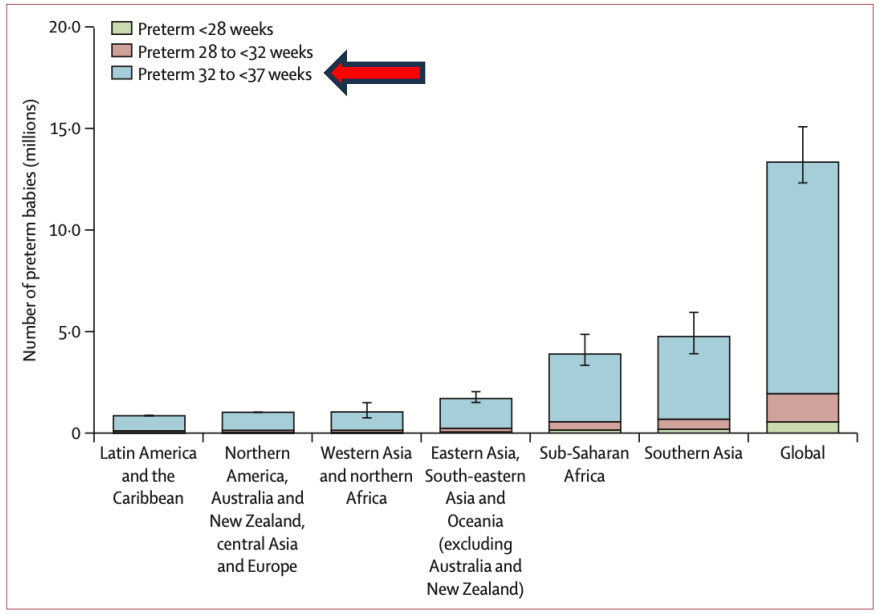
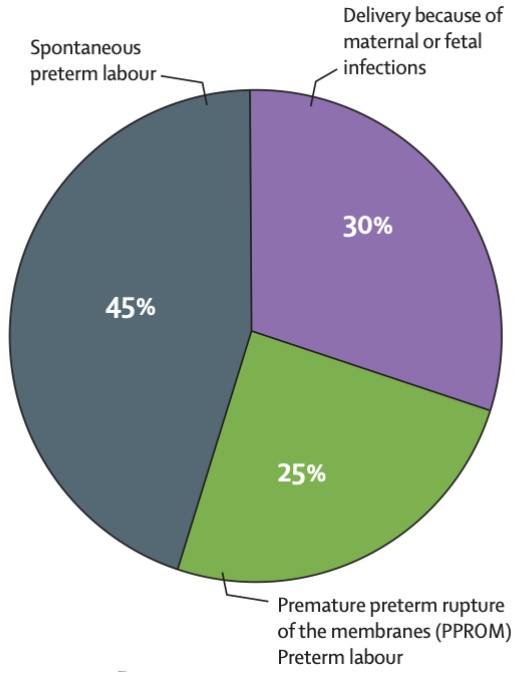


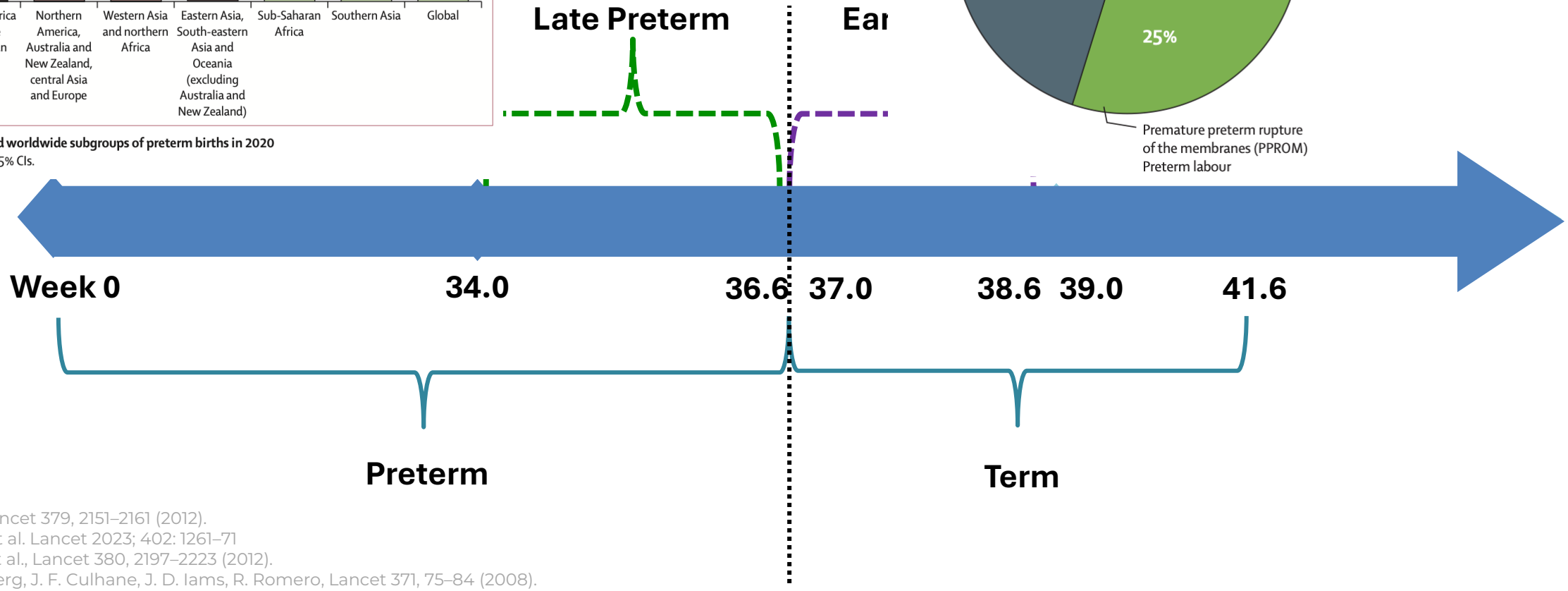
Figure 4: **Regional and worldwide subgroups of preterm births in 2020**
Interval bars are the 95% CIs.

pidemiology and causes of preterm birth

bert L Goldenberg, Jennifer F Culhane, Jay D Iams, Roberto Romero

Moderate/late preterm infants account for 85% of preterm births





L. Liu et al., Lancet 379, 2151–2161 (2012).
Ohuma EO, et al. Lancet 2023; 402: 1261–71
C. J. Murray et al., Lancet 380, 2197–2223 (2012).
R. L. Goldenberg, J. F. Culhane, J. D. Iams, R. Romero, Lancet 371, 75–84 (2008).

Every week counts towards the end of pregnancy

Weeks of gestation


35 weeks


36 weeks


37 weeks


38 weeks


39 weeks


40 weeks

CONTINUING BRAIN MYELINATION AND-GYRAL DEVELOPMENT

INFANT MORBIDITY/ MORTALITY

50%

55%

47%

26%


77%


48%


23%

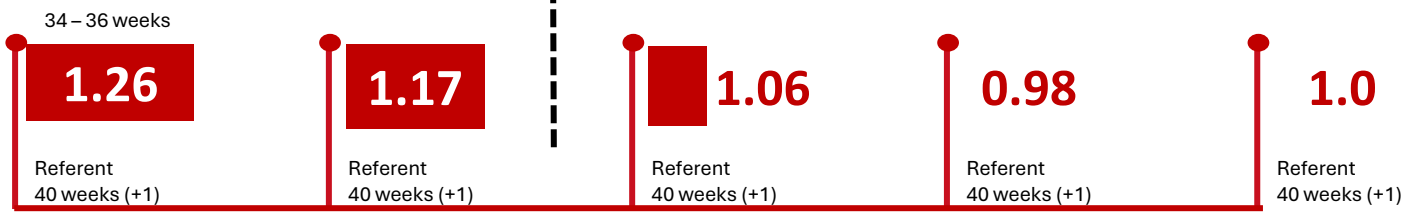

13%


2%


1%

NEURO-DEVELOPMENTAL OUTCOMES

Adjusted relative risks of being DHB



Every week that a baby is born close to 40 weeks decreases their risk of morbidity and spending time at the NICU

Early (at < 39 weeks) planned birth is associated with an increased risk of learning difficulties at school entry

Ohuma EO, et al. Lancet 2023; 402: 1261–71.; Perin J, et al. Lancet Child Adolesc Health 2022; 6: 106–15.; Ramaswamy VV, et al. PLoS One 2021; 16: e0255352.

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REVIEW

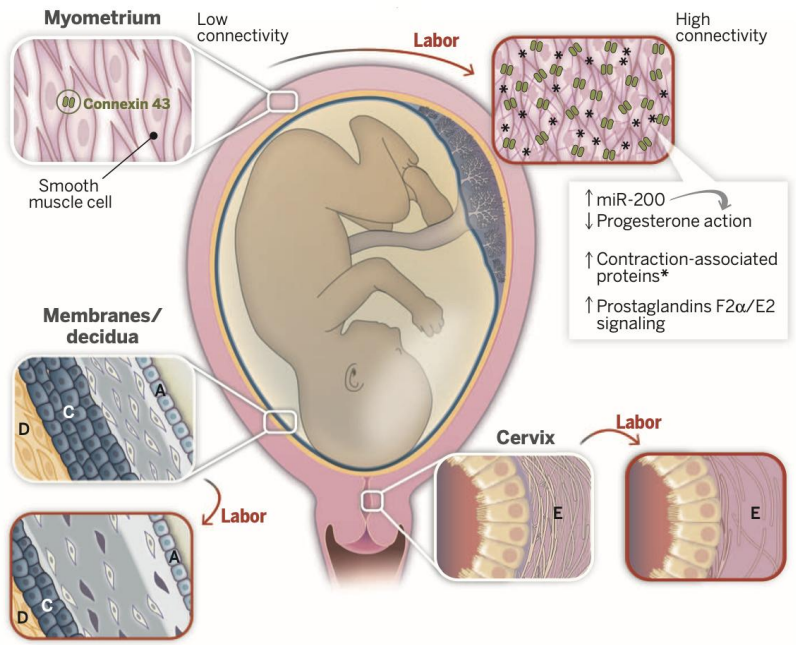
SPONTANEOUS

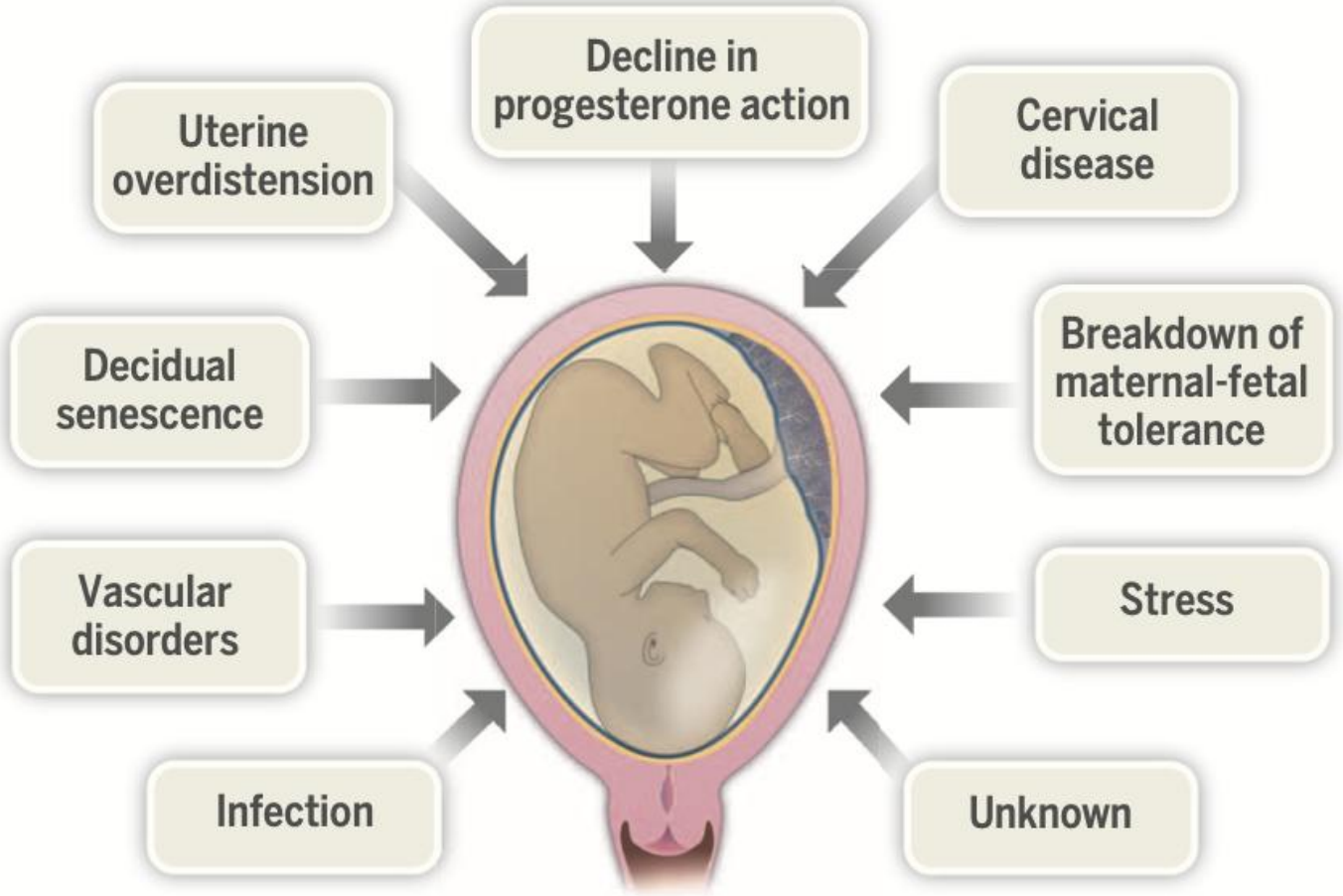
Science
AAAS

Preterm labor: One syndrome, many causes

Roberto Romero,[1,2,3]* Sudhansu K. Dey,[4] S

Different causes. Different biology. Different solutions.





Romero R et al. Science 2014;760-765

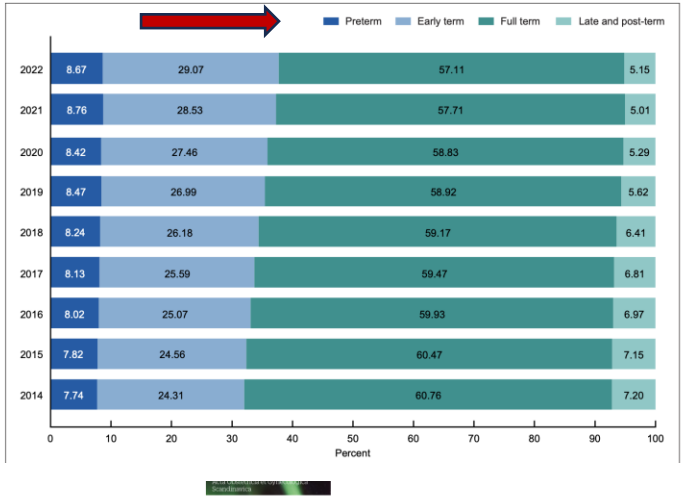
Iatrogenic preterm birth now represents ~50% of all preterm births and varies considerably across healthcare settings.

National Vital Statistics Reports
Volume 73, Number 1 January 31, 2024

Shifts in the Distribution of Births by Gestational Age: United States, 2014–2022

by Joyce A. Martin, M.P.H., and Michelle J.K. Osterman, M.H.S.

Figure 1. Percent distribution of singleton births, by gestational age: United States, 2014–2022



- From 2014–2022, births shifted toward earlier gestational ages, particularly at 37 weeks (+42%).
- The timing of birth is changing: earlier deliveries are becoming increasingly common.

ORIGINAL RESEARCH

Variation in risk factors and timing of birth for different types of preterm birth: A historical cohort study

Vanessa El-Achi[1,2] | James Elhindi[1] | Sarah Melov[1,2] | Justin McNab[1,2] | Sean Seeho[1,3] | Shireen Meher[1,4] | Olivia Byrnes[3,4] | Brad De Vries[1,5] | Tanya Nippita[1,3] | Adrienne Gordon[1,5] | Dharmintra Pasupathy[1,2]

Acta Obstet Gynecol Scand. 2025;104:2135–2145.

- In a cohort of 113,244 singleton pregnancies, 7.0% resulted in preterm birth.
- Nearly half of all preterm births were iatrogenic (49.2%), followed by spontaneous preterm birth (36.9%) and PPROM (13.9%).

Iatrogenic and spontaneous preterm birth in England: A population-based cohort study

Harriet Aughey[1,2] | Jennifer Jardine[1,3] | Hannah Knight[1,3] | Ipek Gurol-Urganci[3] | Kate Walker[3] | Tina Harris[1,4] | Jan van der Meulen[1,3] | Jane Hawdon[1,5] | Dharmintra Pasupathy[1,6] | on behalf of the NMPA Project Team*

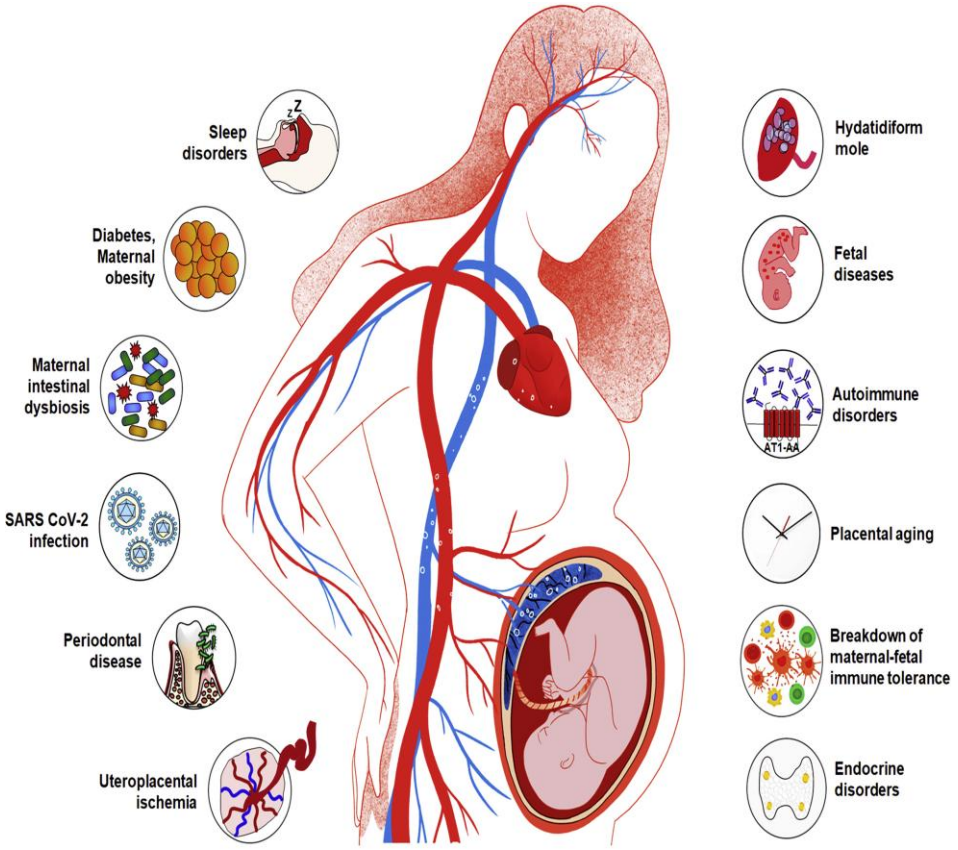
BJOG. 2023;130:33–41.

- In a national cohort from England, 6.1% of singleton births were preterm, and more than half (52.8%) were iatrogenic.

Balancing Maternal and Perinatal Risks in Preeclampsia: When Is Earlier Delivery Justified?

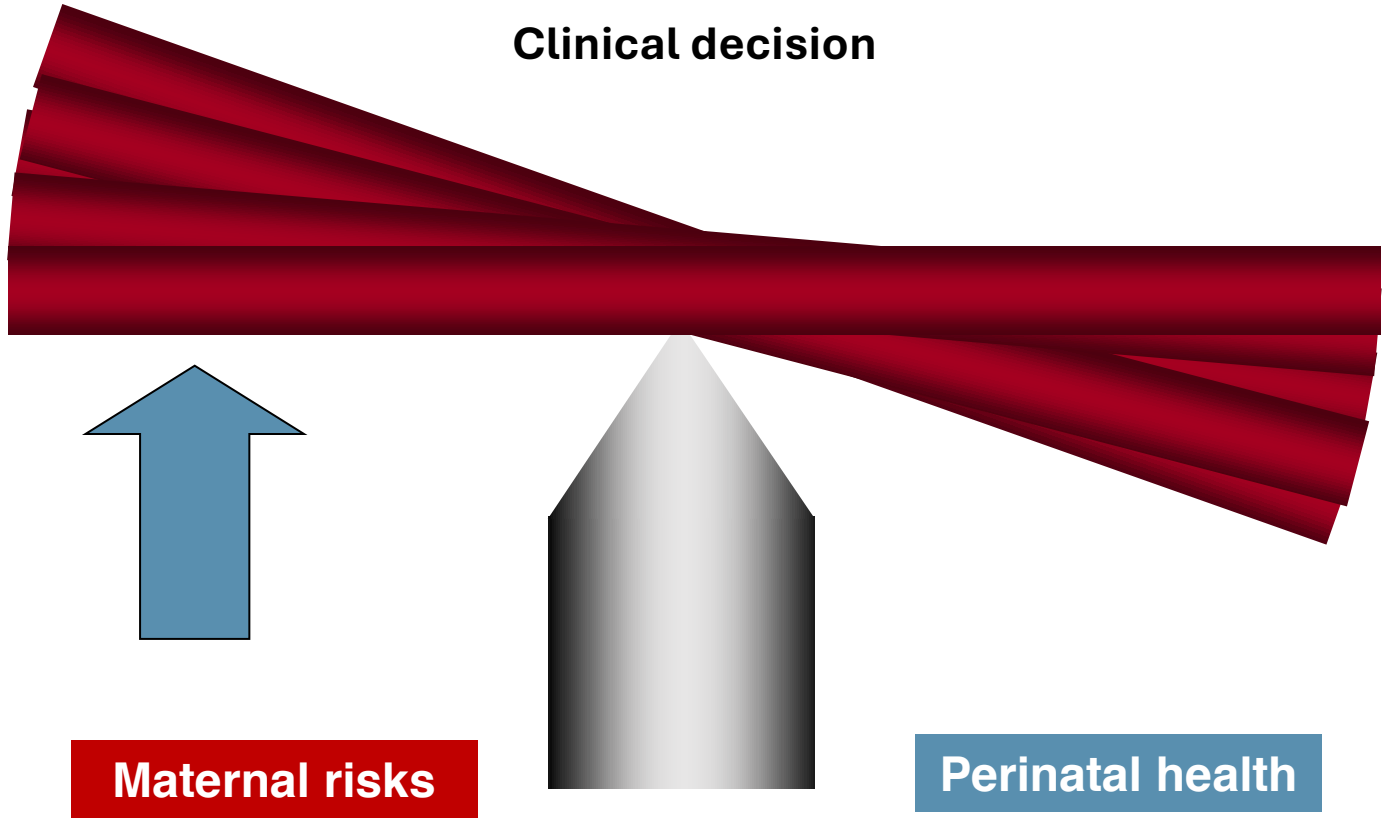
Every additional day in utero may benefit the fetus but may increase maternal risk.

Preeclampsia and related hypertensive disorders claim **more than 70,000 maternal lives** every year



Severe hypertension Eclampsia
Stroke
HELLP syndrome
Liver/renal failure
Placental abruption
Maternal death

Respiratory distress syndrome NICU admission Feeding difficulties
Sepsis/infection
Neurodevelopmental risk Perinatal death



Balancing Maternal and Perinatal Risks in Preeclampsia: When Is Earlier Delivery Justified?

With adequate neonatal care, the balance may shift toward earlier delivery to prevent severe maternal morbidity while accepting manageable prematurity-related risks.

Cochrane Library

Cochrane Database of Systematic Reviews

Published 21 May 2026

Planned early birth versus expectant management for hypertensive disorders from 34 weeks' gestation to term (Review)

Beardmore-Gray A, Rohwer C, Fernandez Turienzo C, Cluver CA

34 weeks

Planned delivery or expectant management for late preterm pre-eclampsia in low-income and middle-income countries (CRADLE-4): a multicentre, open-label, randomised controlled trial

Alice Beardmore-Gray, Nicola Vousden, Paul T Seed, Bellington Vwalika, Sebastian Chinkoyo, Victor Sichone, Alexander B Kawimbe, Umesh Charantimath, Geetanjali Katageri, Mrutyunjaya B Bellad, Laxmikant Lokare, Kasturi Donimath, Shailaja Bidri, Shivaprasad Goudar, Jane Sandall, Lucy C Chappell, Andrew H Shennan, on behalf of the CRADLE-4 Study Group*

Lancet 2023; 402: 386–96

Hypertension

CONCLUSIONS: Risk-stratified timing of birth at term may more than halve the risk of term preeclampsia. *(Hypertension.* 2023;80:969–978. DOI: 10.1161/HYPERTENSIONAHA.122.20565.) • Supplement Material.

ORIGINAL ARTICLE

Preeclampsia Prevention by Timed Birth at Term

Laura A. Magee, David Wright, Argyro Syngelaki, Peter von Dadelszen, Ranjit Akolekar, Alan Wright, Kypros H. Nicolaides

37 weeks

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 AUGUST 9, 2018 VOL. 379 NO. 6

Labor Induction versus Expectant Management in Low-Risk Nulliparous Women

William A. Grobman, M.D., Madeline M. Rice, Ph.D., Uma M. Reddy, M.D., M.P.H., Alan T.N. Tita, M.D., Ph.D., Robert M. Silver, M.D., Gail Mallett, R.N., M.S., C.C.R.C., Kim Hill, R.N., B.S.N., Elizabeth A. Thom, Ph.D., Yasser Y. El-Sayed, M.D., Annette Perez-Delboy, M.D., Dwight J. Rouse, M.D., George R. Saade, M.D., Kim A. Boggess, M.D., Suneet P. Chauhan, M.D., Jay D. Iams, M.D., Edward K. Chien, M.D., Brian M. Casey, M.D., Ronald S. Gibbs, M.D., Sindhu K. Srinivas, M.D., M.S.C.E., Geeta K. Swamy, M.D., Hyagriv N. Simhan, M.D., and George A. Macones, M.D., M.S.C.E., for the Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal–Fetal Medicine Units Network*

39 weeks

Small Vulnerable Newborns-a new definition for improving global newborn and maternal health

In 2020, a quarter (an estimated 35,3 million) of babies born alive were born with one or more of three vulnerabilities:

1.Born too soon (preterm)

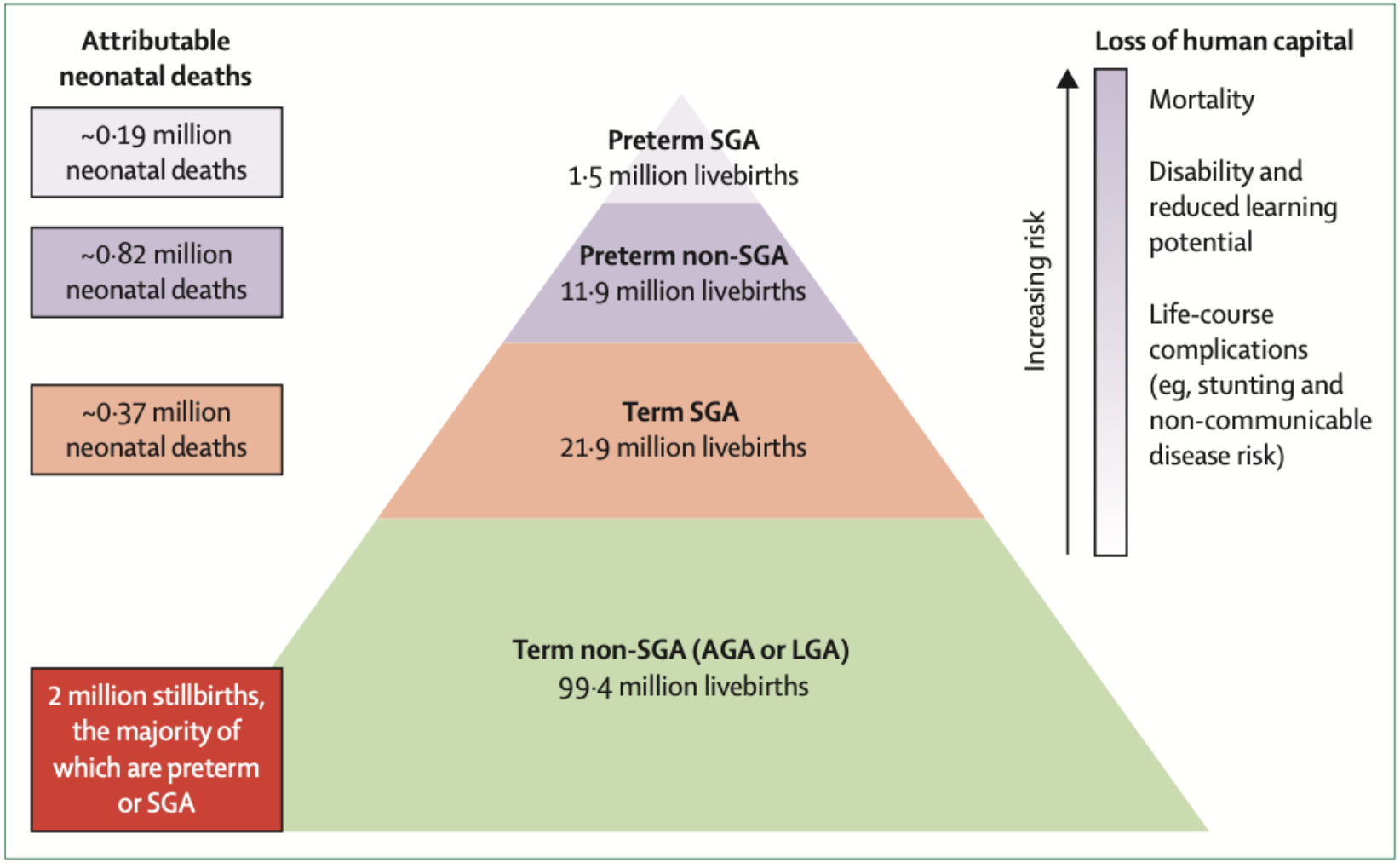
Born before 37 completed weeks of gestation

2. Born too small (SGA)

Birthweight below 10th centile

3. Low birthweight (LBW)

Less than 2500 g



Lawn JE, Lancet 2023; 401: 1707–19

From Prevention to Care: A Continuum of Action

PREVENT PRETERM BIRTH

Some individual strategies have shown promise in the effective prevention of harmful early birth, including:

1. Measurement of cervical length in mid-pregnancy by ultrasound imaging
2. Prescription of vaginal progesterone
3. Cervical cerclage
4. Education of pregnant women
5. Smoking cessation strategies
6. Midwifery continuity of care.

Hessami K, et al. Am J Obstet Gynecol MFM 2024; 6: 101343.
Romero R, et al. Am J Obstet Gynecol 2012; 206: 124.e1–19.
Jarde A, et al. BJOG 2019; 126: 556–67.
Shennan A, et al. Int J Gynaecol Obstet 2021; 155: 19–22.
Care A, et al. BMJ 2022; 376: e064547.
Hobel CJ, et al. Am J Obstet Gynecol 1994; 170: 54–62.
Shirwani A, et al. Obstet Gynecol Surv 2023; 78: 589–97.
1Sandall J, et al. Cochrane Database Syst Rev 2016; 4: CD004667.

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Primary Population Screening → **Precision Screening** → **Targeted Intervention**

Risk is adjusted

Previous Preterm Birth Family History of Preterm Birth
Short Cervix
Multiple Pregnancy Assisted Reproductive Technology (ART) Pregnancy Short Interpregnancy Interval Low or High Body Mass Index (BMI) Maternal Age <16 or >36 Years Abnormal Vaginal
pH / Bacterial Vaginosis (BV)
Positive Fetal Fibronectin Test
Previous Cervical Surgery
Uterine Anomaly
Previous Miscarriage
Maternal Ethnicity
Socioeconomic Status
Periodontal Disease
HPV Vaccination Status

History of PTB
Inflammation
Number of Fetuses

Vaginal infection
Smoking
Cervical Status

Social Factors
Family History

Options for intervention

High Risk

- Vaginal Progesterone
- Cervical Cerclage
- Antibiotics
- Dietary Interventions
- Nicotine Replacement Therapy
- Education and Support

Low risk

- Counseling and Low-Intensity Interventions
- Routine Antenatal Care and Healthcare Access

Newnham JP, et al. Frontiers in public health. 2017; 4;5:66

THE LANCET
Global Health

COMMENT | ONLINE FIRST

Maternal mental health is being affected by poverty and COVID-19

Miguel Parra-Saavedra • Jezid Miranda

Open Access • Published: June 24, 2021 • DOI: https://doi.org/10.1016/S2214-109X(21)00245-X •

Scientific efforts during the COVID-19 pandemic, in respect to pregnancy, have shown that COVID-19 infection is associated with a substantial increase in severe maternal morbidity and mortality,[1] preterm birth, and low birthweight.[2] In addition, preliminary data now suggest that vaccination in pregnant women is safe,[3] and that there is an infrequent possibility of vertical transmission.[4] Yet, less attention has been paid to the maternal health of uninfected women. Challenges that pregnant women face during the COVID-19 pandemic include fear of viral exposure, concerns about their health and of their unborn children, social isolation, childcare, and the increase of job, food, housing, and health-care insecurity.[5] Negative effects on the mental health of mothers (eg, depression, anxiety, and parenting stress) are associated with disruption in the physical, cognitive, and socioemotional development of their children.[6] Emotional or psychological stress during pregnancy affects the neurodevelopment potential of the unborn child. This negative effect further reduces the probability of equal capabilities and opportunities as adults.

The Economist

The Americas | Early start

Latin America is losing its battle against teen pregnancy

Why rates of early motherhood are so high

In 2023, **13.2% of all births in Colombia** were to girls aged 10 to 19, highlighting the ongoing public health and social challenge of adolescent pregnancy.

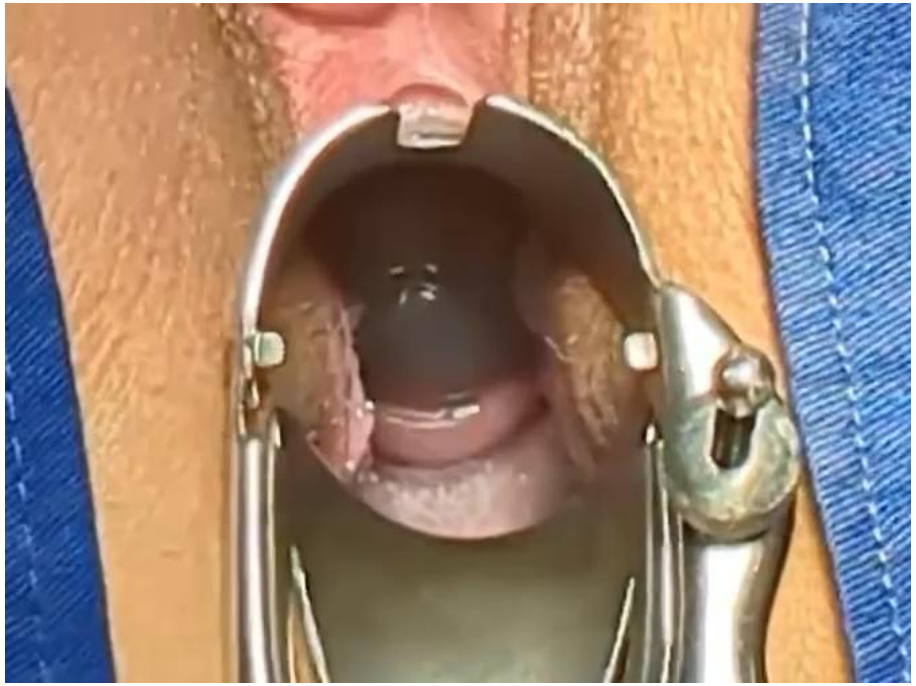
The Economist. https://www.economist.com/the-americas/2019/02/16/latin-america-is-losing-its-battle-against-teen-pregnancy (accessed Mrach 2025).

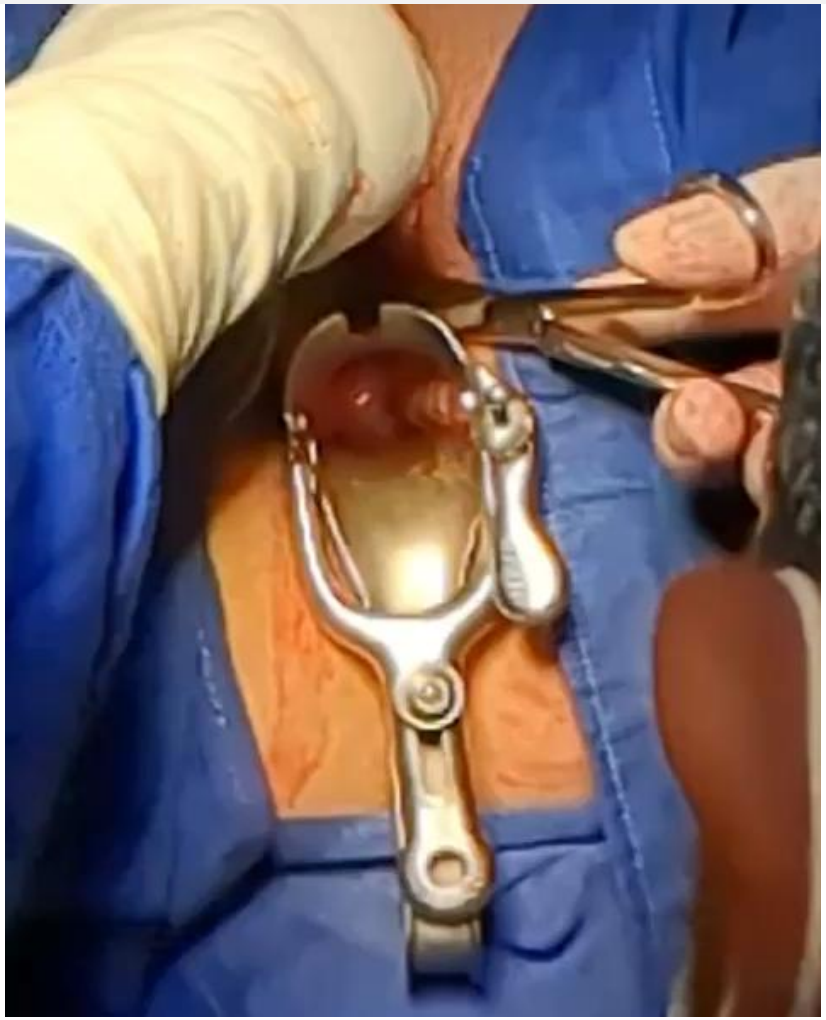
The Obstetric Problem: Limited set of therapies

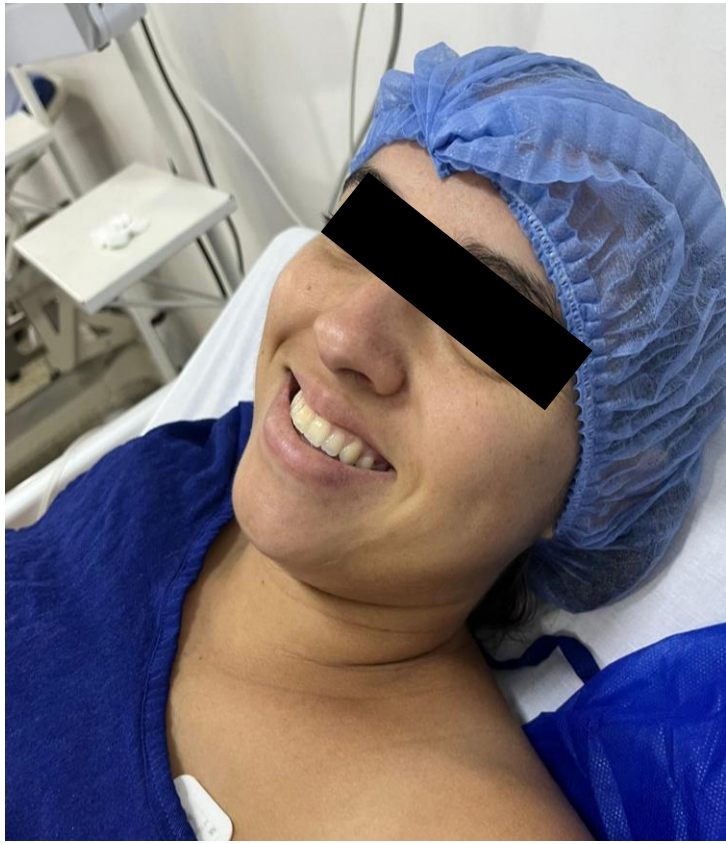
Once preterm labor occurs, therapeutic options are limited.

The Obstetric Problem: Limited set of therapies

Once preterm labor occurs, therapeutic options are limited.





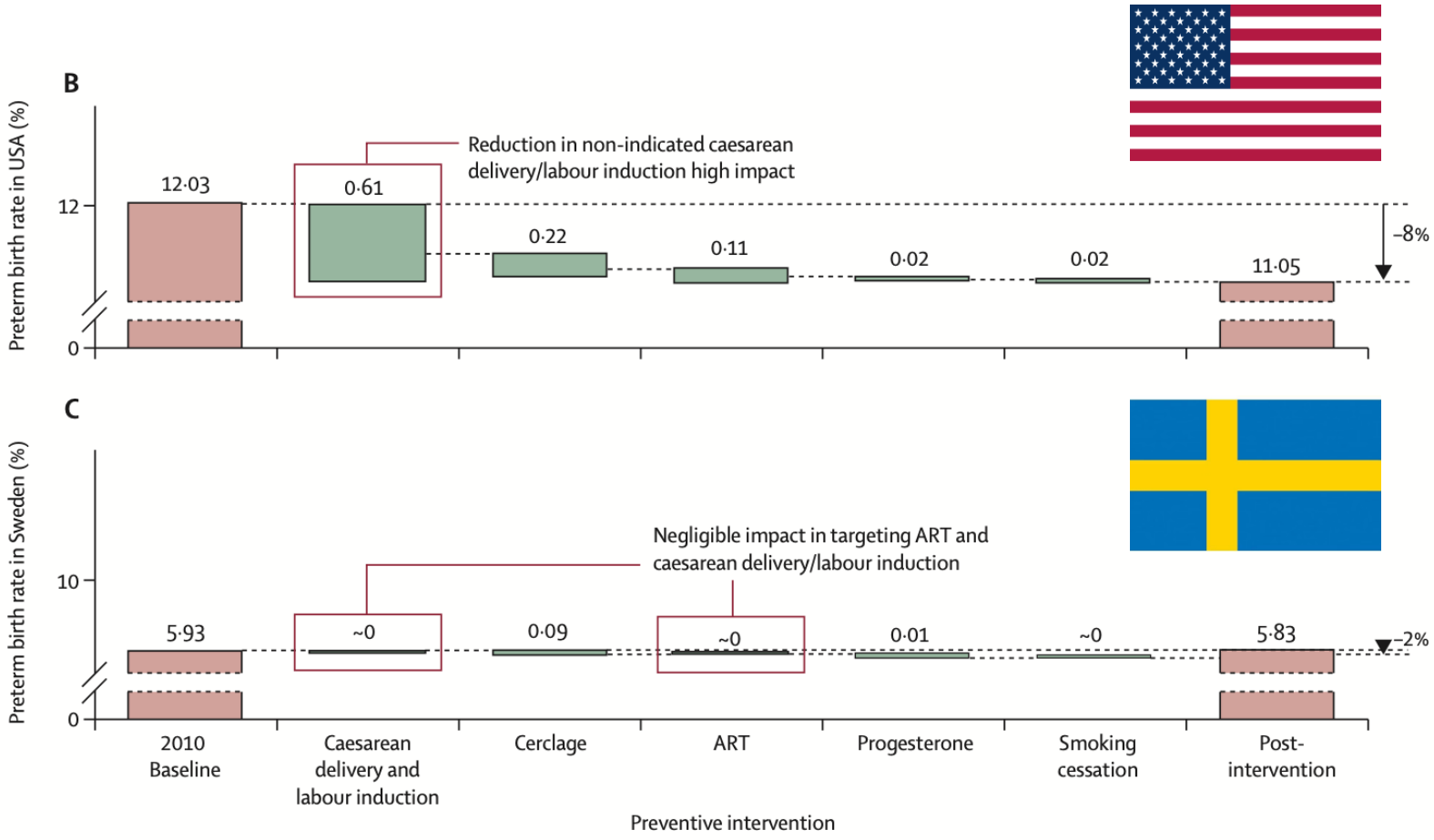


She delivered prematurely six times and lost six babies, illustrating the devastating human cost of recurrent preterm birth.

Preventing preterm births: analysis of trends and potential reductions with interventions in 39 countries with very high human development index

Hannah H Chang, Jim Larson, Hannah Blencowe, Catherine Y Spong, Christopher P Howson, Sarah Cairns-Smith, Eve M Lackritz, Shoo K Lee, Elizabeth Mason, Andrew C Serazin, Salimah Walani, Joe Leigh Simpson, Joy E Lawn, on behalf of the Born Too Soon preterm prevention analysis group

Each country and region must understand the **epidemiology of preterm birth within its own population** and develop targeted intervention strategies that address its *specific underlying causes*.



Lancet 2013; 381: 223–34

Prevention to Care: A Continuum of Action

PREVENT PRETERM BIRTH

High-quality and respectful care for all women and adolescent girls, including

- **Pre-conception care, including family planning**
- **Antenatal care**
- **Measurement of cervical length in mid-pregnancy by ultrasound imaging**
- **Childbirth care,** including reduced provider-initiated birth, unless medically necessary
- **Intersectional interventions-e.g.,** nutrition, girls' education, mitigation of climate change, etc

Manage preterm labor

- Antenatal corticosteroids
- Tocolytics to slow down labor
- Emergency cerclage
- Antibiotics for PPROM

IMPROVE NEWBORN CARE

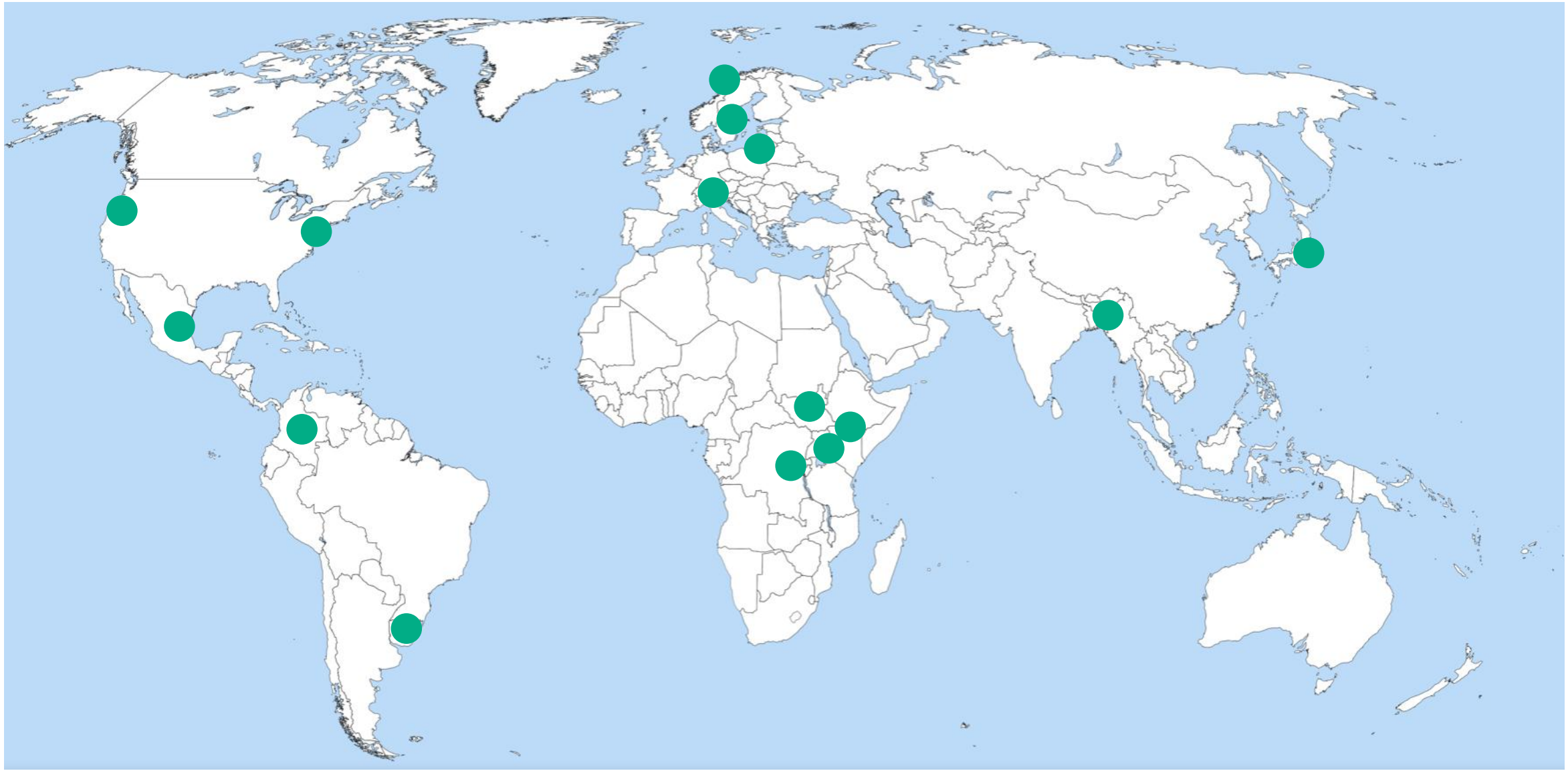
High-quality, family-centered, respectful care for every newborn, including

- **Essential newborn care**, especially neonatal resuscitation and feeding support
- **Kangaroo Mother Care**
- **Small and sick newborn care**, especially for respiratory distress syndrome, infections, jaundice
- **Neonatal intensive care**

Hessami K, et al. Am J Obstet Gynecol MFM 2024; 6: 101343.
Romero R, et al. Am J Obstet Gynecol 2012; 206: 124.e1–19.
Jarde A, et al. BJOG 2019; 126: 556–67.
Shennan A, et al. Int J Gynaecol Obstet 2021; 155: 19–22.
Care A, et al. BMJ 2022; 376: e064547.
Hobel CJ, et al. Am J Obstet Gynecol 1994; 170: 54–62.
Shirwani A, et al. Obstet Gynecol Surv 2023; 78: 589–97.
1Sandall J, et al. Cochrane Database Syst Rev 2016; 4: CD004667.

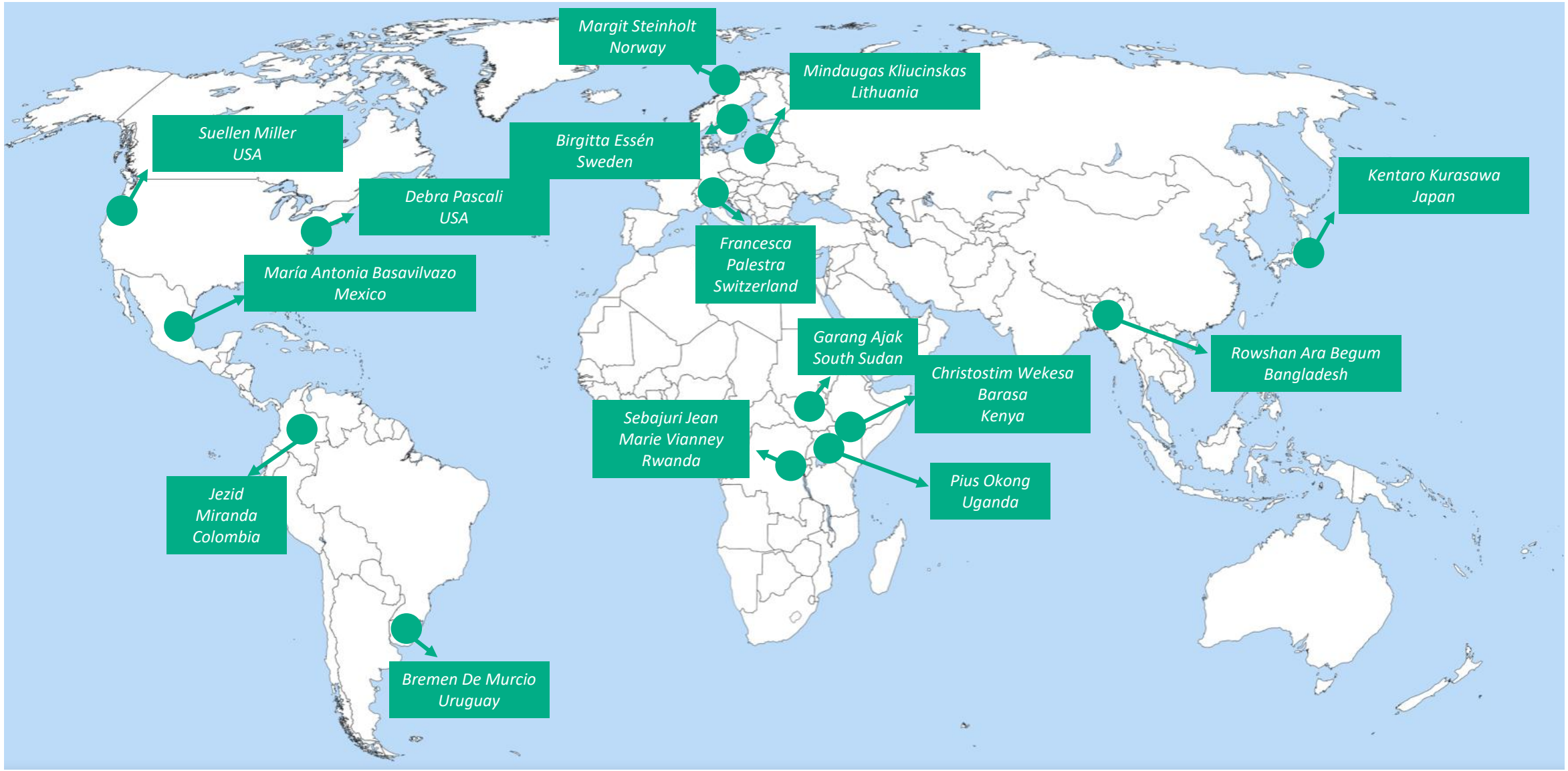
Committee on Health Systems Strengthening and Respectful Care

FIGO
International Federation of Gynecology and Obstetrics
the Global Voice for Women's Health



Committee for Health Strength System in Pregnancy and Perinatal Care and Respectful Care

FIGO
International Federation of Gynecology and Obstetrics
the Global Voice for Women's Health



As part of FIGO, the International Federation of Gynecology and Obstetrics, our aim within the Committee on Health Systems Strengthening is to advance a strategic global vision that supports resilient, equitable, and rights-based maternal and perinatal care, ensuring communication and evidence-based guidelines to scientific societies worldwide.

DOI: 10.1002/ijgo.15553

SPECIAL ARTICLE

Global health systems strengthen
reducing maternal and newborn m

Jezid Miranda[1,2] | **Suellen Miller**[3] | **Nikita Alfier**
Edgar Ivan-Ortiz[6] | **Claudia Hanson**[7] | **Margit S**
Harris Suharjono[11] | **Stefan Gebhardt**[12] | **Jean-Paul Dossou**[13] | **Debra Pascali-Bonaro**[14] | **Bo Jacobsson**[15,16,17] | **Pius Okong**[18] | **on behalf of the FIGO Committee on Health Systems Strengthening and Respectful Care**

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Synopsis

The contents of this page will be used as part of issue TOC only. It will not be published as part of main article.

Addressing Disrespectful Maternity Care

Received: 6 March 2025 | Revised: 17 July 2025 | Accepted: 22 August 2025

DOI: 10.1002/ijgo.70513

SPECIAL ARTICLE

Obstetrics

FIGO statement on respectful care: Addressing disrespectful maternity care

Jezid Miranda[1,2] | Hasmik Bareghamyan[3] | Michelle N. S. Therrien[4,5] | Andre Lalonde[6,7] | Margit Steinholt[8,9] | Francesca Palestra[10] | Debra Pascali-Bonaro[11] | Mindaugas Kliucinskas[12] | María A. Basavilvazo Rodríguez[13] | Garang Ajak[14] | Eliana Amaral[15] | Pius Okong[16] | Birgitta Essèn[17] | Bo Jacobsson[18,19,20] | Suellen Miller[4] | on behalf of the FIGO Committee on Health Systems Strengthening and Respectful Care

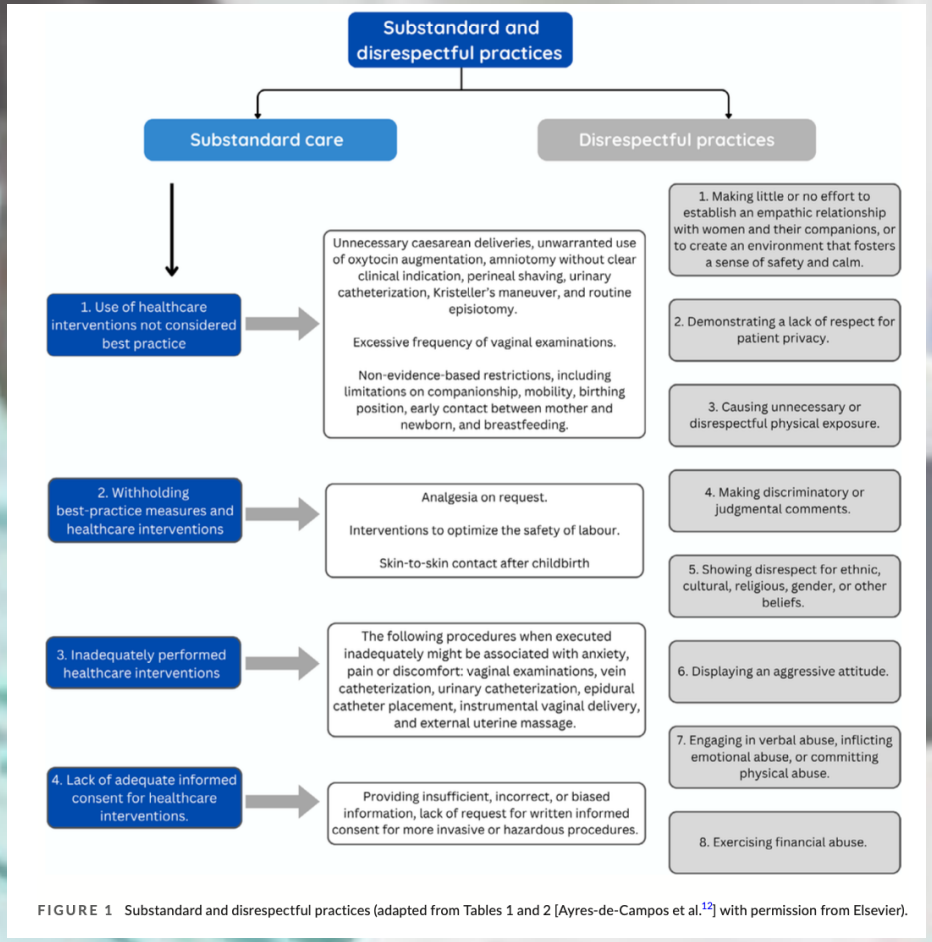


FIGURE 1 Substandard and disrespectful practices (adapted from Tables 1 and 2 [Ayres-de-Campos et al.[12]] with permission from Elsevier).

Advancing Knowledge Through Cross-Disciplinary Collaboration

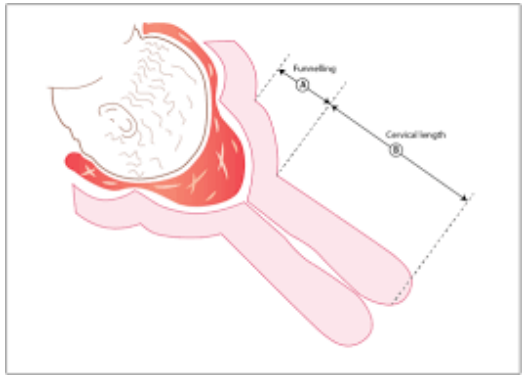
Description
Who? Why? Where?

- ✓ Epidemiology
- ✓ Risk factors
- ✓ Social determinants
- ✓ Phenotyping preterm birth
- ✓ Health systems analysis

Discovery Science
Identify mechanisms

- ✓ Placental biology
- ✓ Infection & inflammation
- ✓ Vaginal microbiome
- ✓ Genetics & epigenetics
- ✓ Multi-omics

Developmment & validation
Create solutions



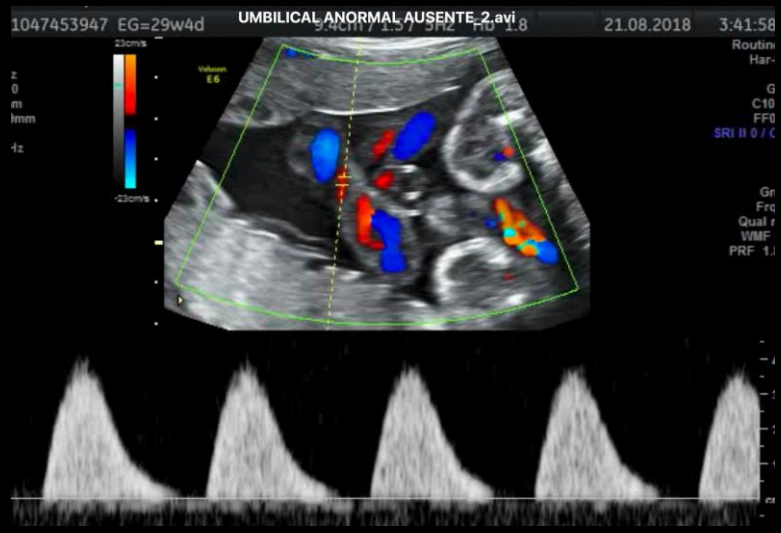
- ✓ Biomarkers
- ✓ Risk prediction models
- ✓ Screening strategies
- ✓ Therapeutics Vaccines
- ✓ Medical devices

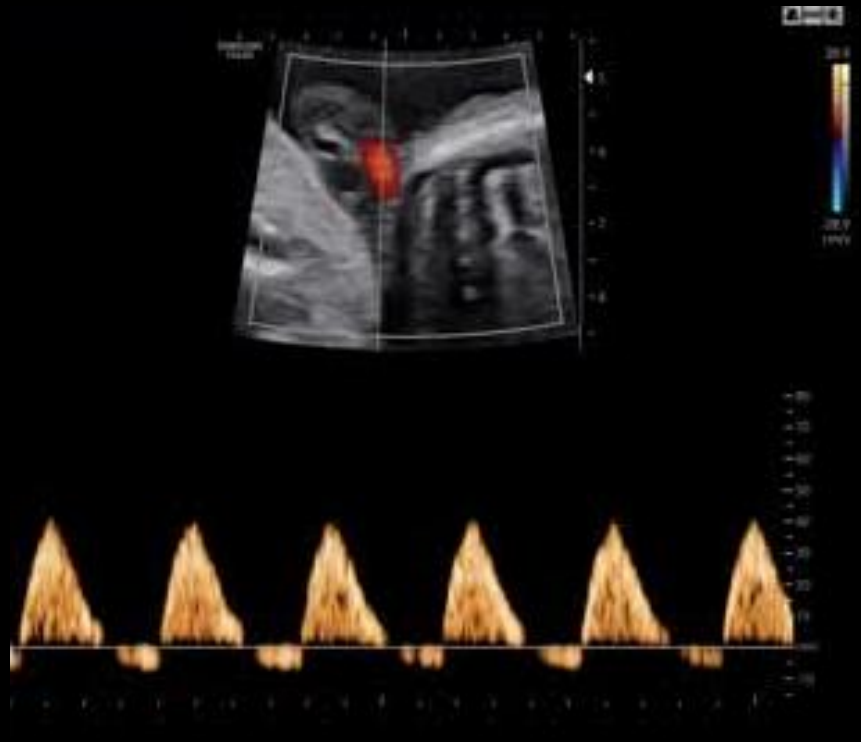
Delivery
Implementation research
"Make Solutions work"

- ✓ Feasibility
- ✓ Acceptability
- ✓ Cost-effectiveness
- ✓ Health workforce
- ✓ Scale-up strategies

Diverse minds achieve better outcomes than like-minded groups.

Iatrogenic Preterm Birth for Fetal Growth Restriction





To save this newborn we need system change

- Strong **leaders**
- Stronger **nurses**
- **Reliable power**, water, and oxygen
- Tech that **survives** the real world
- ***Data with a purpose***
- Families in the driver's seat
- Curiosity without limits

¡Gracias!

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FIGO International Federation of Gynecology and Obstetrics

isuog.org

Caribbean Center for Fetal Diagnosis and Therapy

fetal iD EDUCATION BARCELONA