THE AGA KHAN UNIVERSITY

World Health Organization

Challenges and Priorities in Maternal, Newborn and Child Health

Prof dr Marleen Temmerman

Chair Dept OB/GYN Aga Khan University Hospital, Nairobi, Kenya

Director, Centre of Excellence Women & Child Health, Aga Khan University EA

Senior WHO Advisor Women and Child Health

ICRH
INTERNATIONAL CENTRE FOR REPRODUCTIVE HEALTH
Improving sexual and reproductive health through research, training and adapted interventions

GHENT UNIVERSITY

Short bio

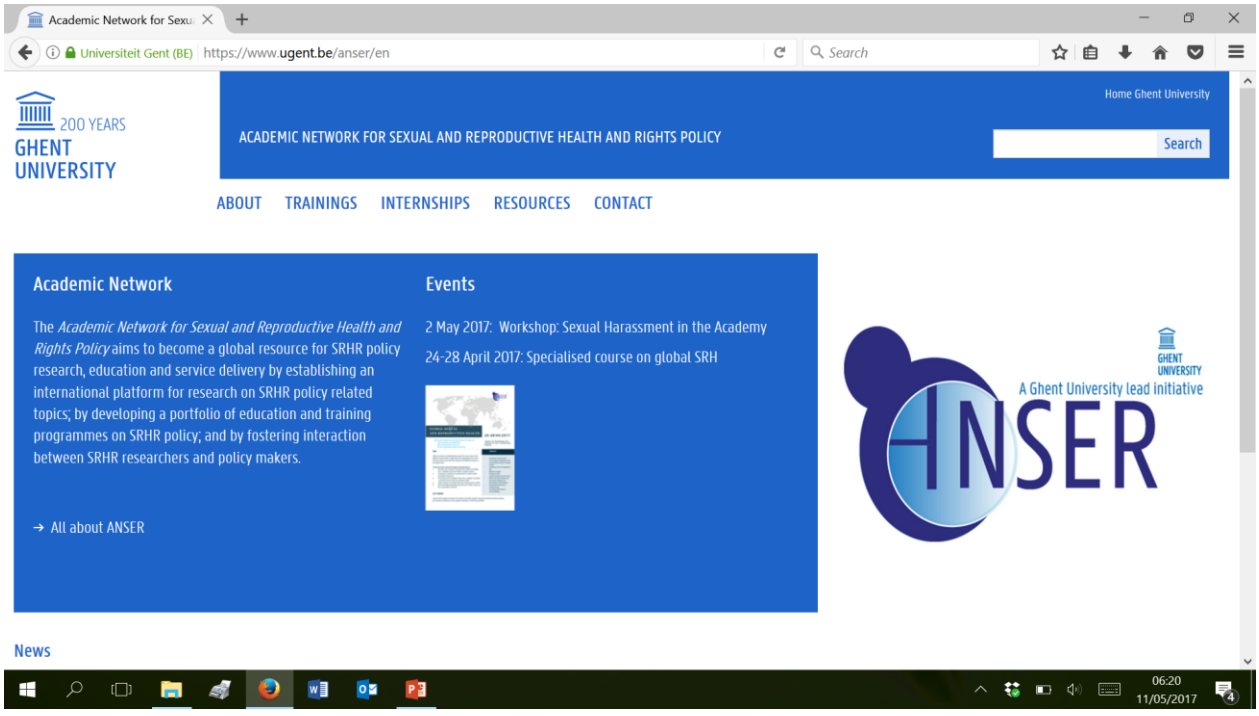
- MD, MPH, PhD, OB/GYN
- Academic Ghent University, University of Nairobi,
- Politics: elected Senator Belgian Parliament
- iERG member of EWEC
- WHO Director Reproductive Health and Research
- Aga Khan University, East Africa

First female prof OB/GYN

3

Founding Director International Centre Reproductive Health 1994

ICRH



FACULTY OF MEDICINE AND HEALTH SCIENCES

ICRH

Activities in China

First collaboration ICRH-China

- 2001-2002
- Project : Integrating HIV/STI prevention & management into Family Planning
- Collaborations: Fudan University and State Family Planning Commission of China

7

2005-2010

- 3 projects in the context of EU FP6

PAFP: Post-Abortion Family Planning Service in China (2005-2009)

YOLAMI: Young Labour Migrant in Chinese cities (2006-2009)

CHIMACA: China Maternal Care in rural area (2006-2010)

8

FP7 project 2012-2017

- INPAC: Integrating Post-Abortion Family Planning services in hospital setting in China
- Sites
  - 350 public hospitals in 30 provinces in China
- Collaborators in China:
  - 30 Provincial Coordinators
  - 350 Hospital Coordinators
  - >3500 Health Provider Collaborators
  - >100,000 Women and Their Family

9

Millenium Development Goals

Global Strategy for women's and children's health (2011-2015)
Every woman every child

Many initiatives under EWEC

EVERY WOMAN EVERY CHILD

COMMITTING TO CHILD SURVIVAL
A PROMISE RENEWED

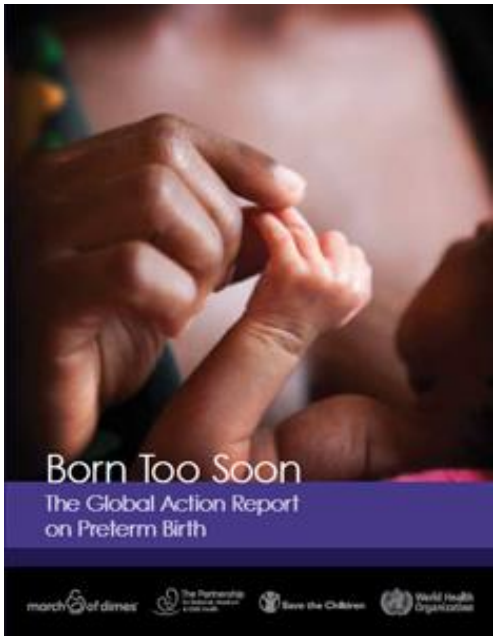
Scaling Up NUTRITION

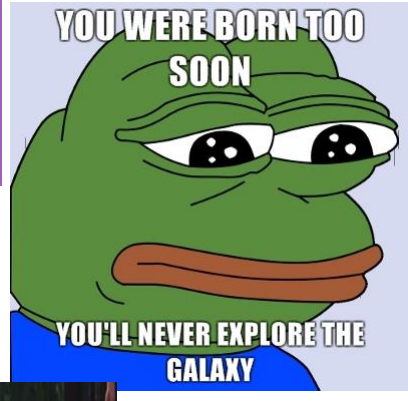
EVERY NEWBORN
AN ACTION PLAN TO END PREVENTABLE DEATHS

Family Planning 2020

Global action plan for prevention and control of pneumonia (GAPP)

DECADE of VACCINES COLLABORATION





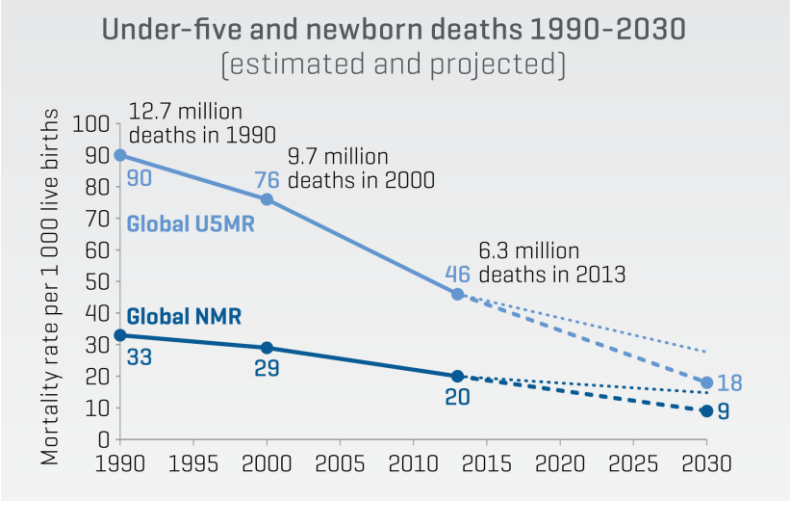
The MDGs and the Global Strategy 2010-15

The UNSG's 2015 progress report:

- Health of women and children is now higher on the political agenda
- Over 300 stakeholders from all constituencies made 400 commitments
- US$45 billion in new financing, almost 60% (US$ 34.2 billion) disbursed
- New global initiatives were launched
- 1000 innovations have been selected and supported
- More Research has been carried out
- Landmark accountability framework for women and children's health

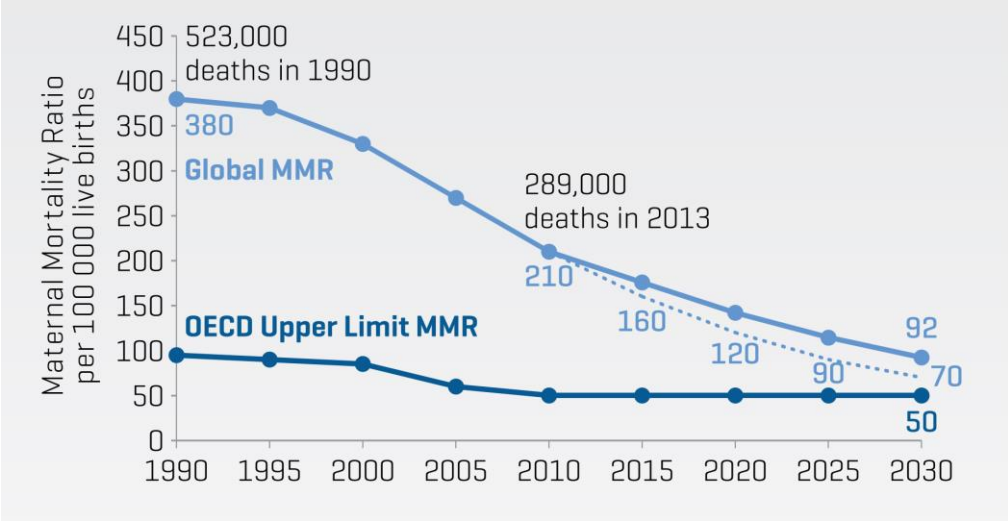
MDG 4 – Reduce child mortality

Since 1990 the global under-five mortality rate has dropped 49 percent



MDG 5: Improving maternal health

Since 1990 the global maternal mortality has dropped over 40%



Lessons learned from the Global Strategy since 2010

What worked well

- Political leadership and commitment
- Multi-stakeholder partnerships
- Accountability framework with CoIA and the iERG
- Every Woman Every Child global movement

What could work better

- Country plans and priorities leading global collective action
- Coordination with existing initiatives
- Reducing fragmentation with new initiatives
- Sufficient and effective financing for women's and children's health
- Better coordination between research and action

EVERY WOMAN EVERY CHILD

At the end of the Millennium Development Goals era…

No woman should die while giving life

303,000 die

No baby stillborn

2.6 million die

No newborn born to die

2.7 million die

No child dying or stunted

3.2 million die

Progress slower than for child or maternal mortality

Almost 9 million deaths of women and children, 6 million related to pregnancy and birth

RENEWED GLOBAL STRATEGY FOR WOMEN'S, CHILDREN'S AND ADOLESCENTS' HEALTH

BMJ 351:Suppl1

thebmj

Towards a new Global Strategy for Women's, Children's and Adolescents' Health

Vision and principles

Vision

By 2030, a world in which every woman, child and adolescent in every setting realizes their rights to physical and mental health and well-being, has social and economic opportunities, and is fully able to participate in shaping sustainable and prosperous societies.

Guiding principles

- Country led
- Universal
- Sustainable
- Human rights-based
- Equity enhancing and gender responsive
- Evidence informed
- Partnership driven
- People centred
- Community owned
- Accountable
- Aligned with development effectiveness and humanitarian norms

Unfinished agenda and emerging priorities

Progress made:

- Overall reduction of maternal and child mortality
- We can envision to end ALL preventable deaths

Remaining gaps and emerging priorities

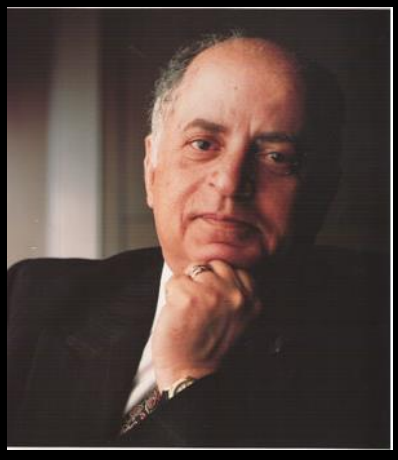
- Adolescents and young people
- Stillbirths, preterm births,
- Increasing burden of NCDs, cancers and mental health
- Nutrition and environmental risk factors

1. ***SURVIVE***
   End preventable deaths

2. ***THRIVE***
   Improve health and wellbeing

3. ***TRANSFORM***
   Enhance systems and enabling environment

The GS Goals and Targets is aligned with the SDGs, and finalized through a consensus process

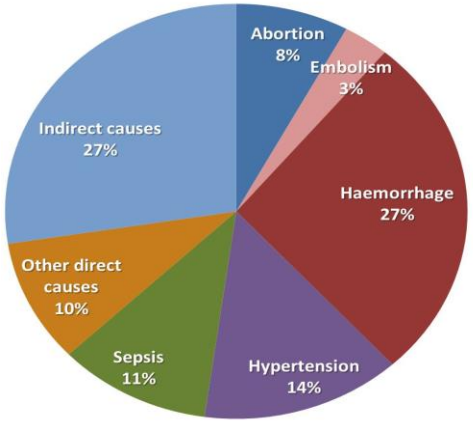


"Women are not dying of diseases we can't treat. … They are dying because societies have yet to make the decision that their lives are worth saving."

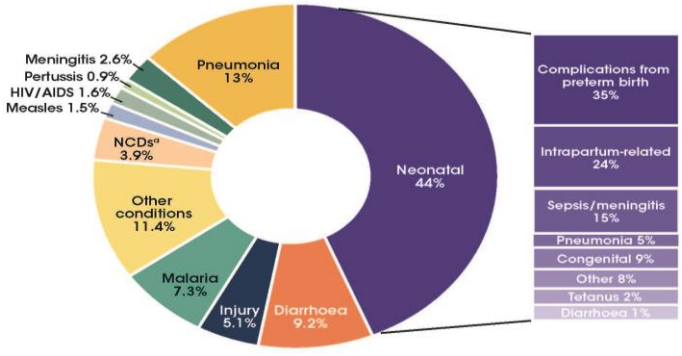
Mahmoud Fathalla

Major causes of mortality

Causes of maternal mortality



Causes of newborn and child mortality

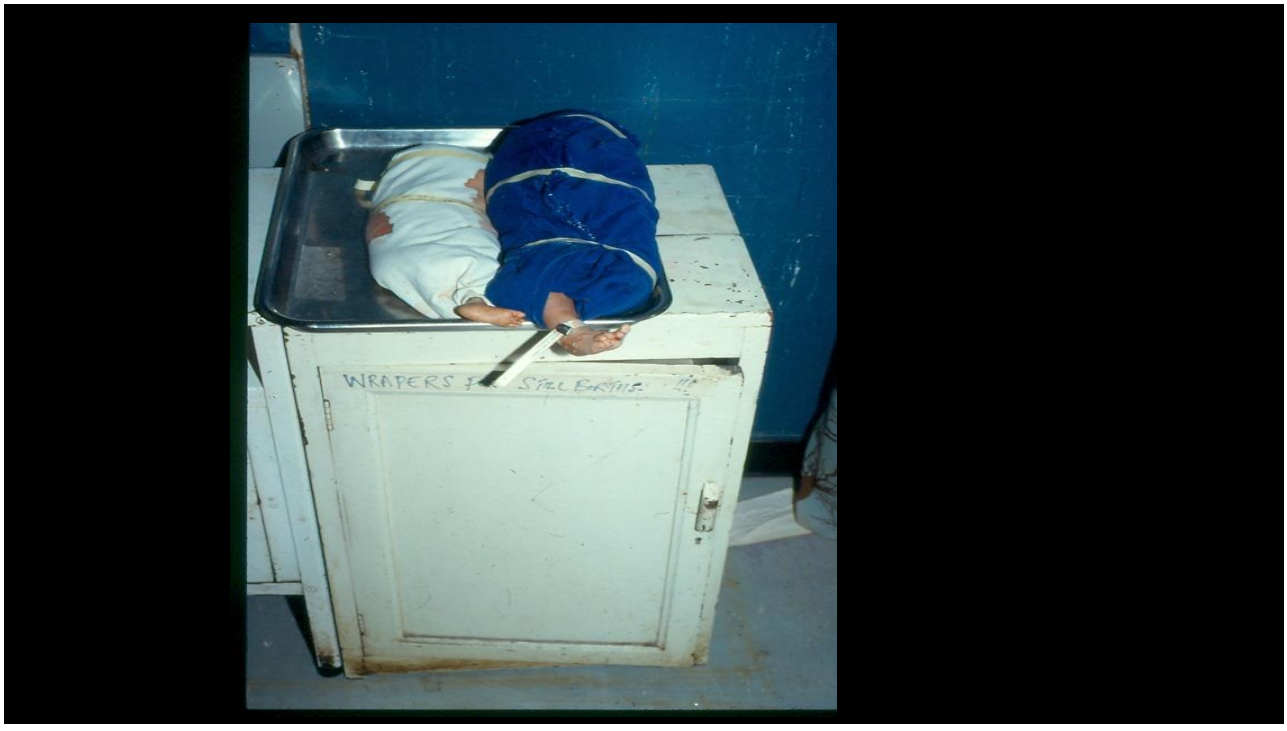


More than 80% of newborn deaths are in small babies (preterm or small for gestational age) in the highest burden settings.

In addition, every year there are 2.6 million stillbirths – 1.2 million occur after the onset of labour


PUMWANI
MATERNITY HOSPITAL
Quality Maternal Care
WELCOME - KARIBU

Quality of care at Childbirth: a triple return on investment! Reducing Maternal and Newborn Mortality, preventing Stillbirths


WRAPERS


THE LANCET
STILLBIRTHS:
RATES, RISKS &
PREVENTABILITY
Credit: © Photo Tagaza Djibo/UNFPA/Niger
www.lancet.com/series/ending-preventable-stillbirths
#EndStillbirths


THE LANCET

Stillbirths

An Executive Summary for The Lancet's Series


THE LANCET

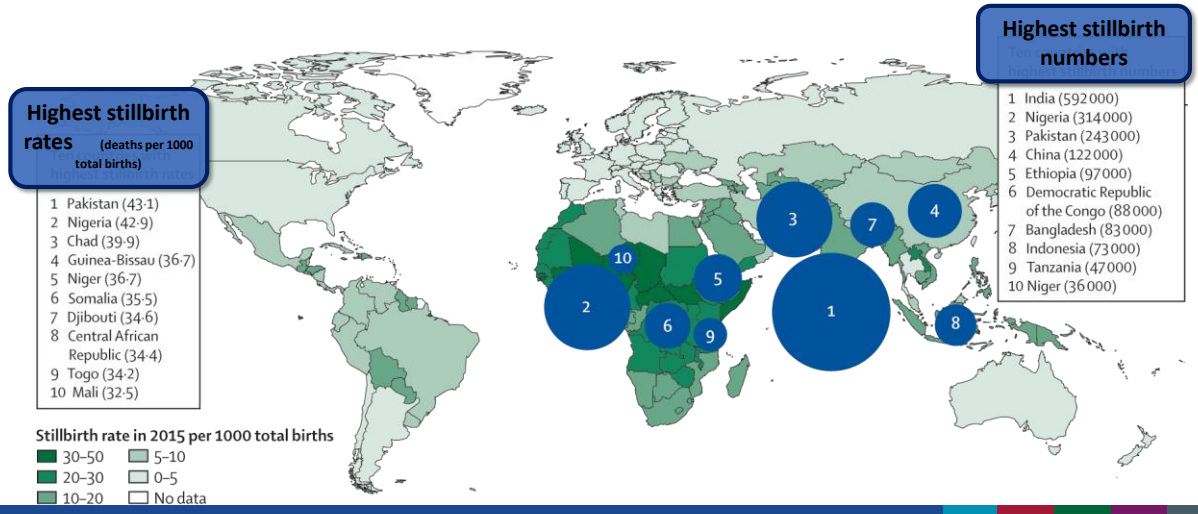
Ending preventable stillbirths

An Executive Summary for *The Lancet's* Series

"At the core of public health programmes for women's and children's health... high quality antenatal and intrapartum care protects the mother and her baby, and represents a quadruple return on investments, saving the lives of mothers and newborns, preventing stillbirths, and additionally, improving child development."[1]

Where?

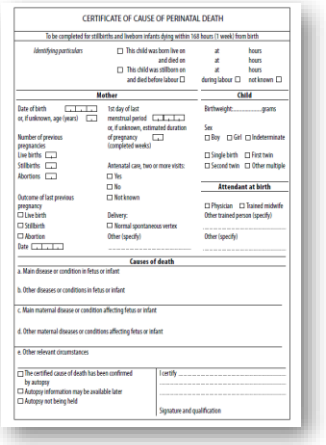
2.6 million stillbirths in 2015, 98% in LMIC



10 countries account for two-thirds of stillbirths in 2015 as well as the majority of maternal and neonatal deaths

Data inputs

- Stillbirth rates:
  - Data availability almost doubled compared to previous estimates
  - Now 2207 datapoints from 157 countries,
  - Definition consistency improved
- Intrapartum stillbirths
  - Marked data gap remains >130 countries with no data
- Cause of death classification for stillbirths
  - Still a gap with > 35 classification systems
  - World Health Organization working on this now


CERTIFICATE OF CAUSE OF PERINATAL DEATH

To be completed for stillbirths and liveborn infants dying within 168 hours (1 week) from birth

Identifying particulars

☐ This child was born live on ... at ... hours
and died on ... at ... hours
☐ This child was stillborn on ... at ... hours
and died before labour ☐ during labour ☐ not known ☐

Mother

Date of birth ... or, if unknown, age (years) ...
1st day of last menstrual period ... or, if unknown, estimated duration of pregnancy ... (completed weeks)
Number of previous pregnancies
Live births ...
Stillbirths ...
Abortions ...
Antenatal care, two or more visits: ☐ Yes ☐ No ☐ Not known
Outcome of last previous pregnancy
☐ Live birth
☐ Stillbirth
☐ Abortion
Date ...
Delivery: ☐ Normal spontaneous vertex
Other (specify)

Child

Birthweight: ... grams
Sex ☐ Boy ☐ Girl ☐ Indeterminate
☐ Single birth ☐ First twin
☐ Second twin ☐ Other multiple

Attendant at birth

☐ Physician ☐ Trained midwife
Other trained person (specify)
Other (specify)

Causes of death

a. Main disease or condition in fetus or infant
b. Other diseases or conditions in fetus or infant
c. Main maternal disease or condition affecting fetus or infant
d. Other maternal diseases or conditions affecting fetus or infant
e. Other relevant circumstances

☐ The certified cause of death has been confirmed by autopsy
☐ Autopsy information may be available later
☐ Autopsy not being held

I certify ...

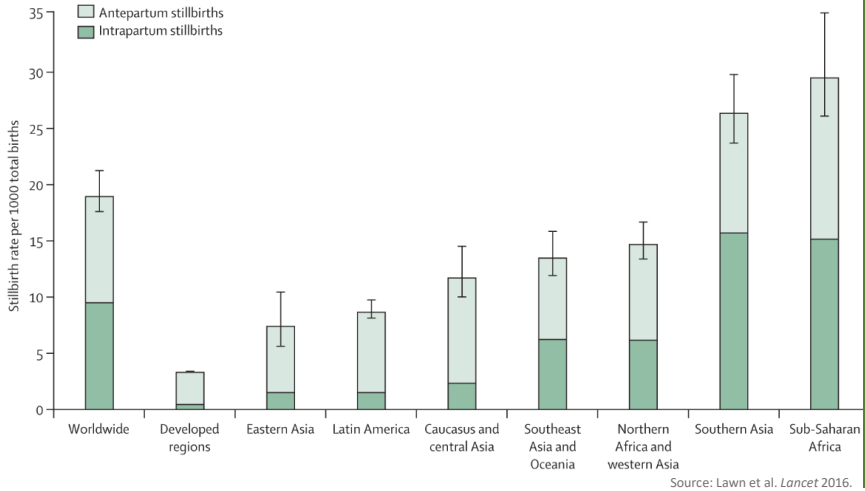
Signature and qualification

Source: Lawn et al. *Lancet* 2016.

When?

Half of stillbirths occur during labour

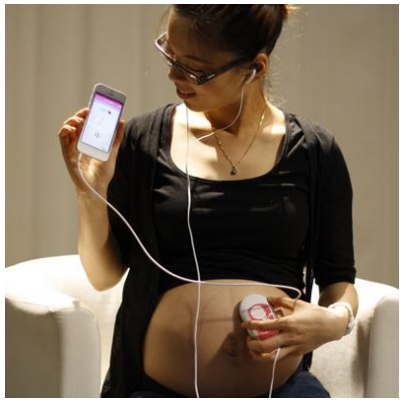
Regional stillbirth rate, showing % that are intrapartum



Source: Lawn et al. *Lancet* 2016.

Globally 1.3 million stillbirths during labour

250 times higher risk in Pakistan and Nigeria compared to Scandinavian countries



River of Life: WHO

- Every country should reduce MMR by at least 2/3 from 2010 baseline
- No country should have MMR > 140 deaths per 100,000 live births
- Global MMR should be < 70 maternal deaths per 100,000 live births

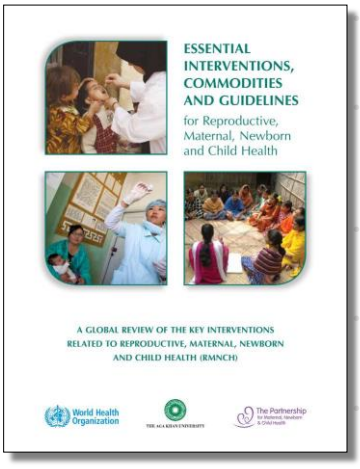
River of Life: WHO

- Every country should have national neonatal mortality rate ≤ 12 per 1000 live births
- Global neonatal mortality rate milestone 9 per 1000 live births

River of Life: WHO

- Every country should have stillbirth rate of ≤ 12 per 1000 total births
- Global stillbirth milestone rate 9 per 1000 total births

Consensus based essential RMNCH interventions



First ever multi-stakeholder consensus on what works for RMNCH

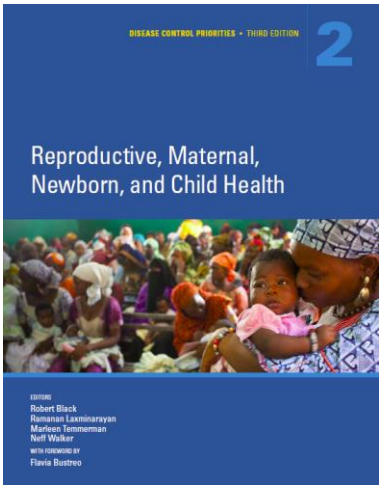
Led by WHO, Aga Khan University in Pakistan and PMNCH with 40+ friends…

Based on 3 year review – over 50 000 scientific papers

Packages of care across the continuum of care

Supports policy making and resource allocation at global and national level

Volume 2: Reproductive, Maternal, Newborn & Child Health



Editors:

1. Robert Black
2. Marleen Temmerman
3. Neff Walker
4. Ramanan Laxminarayan

Disease Control Priorities History

- 1993 World Development Report
- *Disease Control Priorities in Developing Countries, Second Edition* 2006 (*DCP2*)
- *Disease Control Priorities, 3rd Edition* 2015-2016 (*DCP3*)

Disease Control Priorities, 3rd Edition

DCP3 Volume Topics
1. Essential Surgery - 2015
2. Reproductive, Maternal, Newborn, and Child Health -2016
3. Cancer - 2015
4. Mental, Neurological, and Substance Use Disorders - 2016
5. Cardiovascular, Respiratory, and Related Disorders - 2016
6. HIV/AIDS, STIs, Tuberculosis, and Malaria - 2016
7. Injury Prevention and Environmental Health - 2016
8. Child and Adolescent Development - 2016
9. Disease Control Priorities and Universal Health Coverage - 2016

@dcpthree | #dcp3

Multiple Volumes, Common Elements

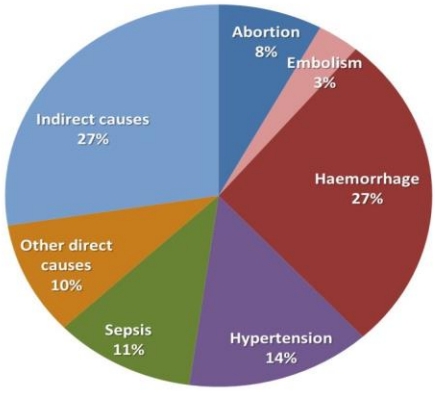
@dcpthree | #dcp3

DCP3 Overall

- Summarize and synthesize evidence of the effectiveness and comparative evaluation of global health interventions.
- Strengthen the capacity of evidence based priority-setting in global health.
- Introduce new methods for assessing the equity and financial protection considerations of health and policy.

@dcpthree | #dcp3

Global Maternal Causes of Death



Between 2003 and 2009, haemorrhage, hypertensive disorders, and sepsis were responsible for more than half of maternal deaths worldwide. More than a quarter of deaths were attributable to indirect causes. *Say et al, Lancet, 2014*

Essential Interventions: Maternal & Newborn

	Delivery platform[a]		
	Community worker or health post	*Primary health center*	*First-level and referral hospitals*
Pregnancy	1. Preparation for safe birth and newborn care; emergency planning		
	2. Micronutrient supplementation[b]		
	3. Nutrition education[b]		
	4. IPTp[b]		
	5. Food supplementation[b]		
	6. Education on family planning	1. Management of unwanted pregnancy[b]	
	7. Promotion of HIV testing	2. Screening and treatment for HIV and syphilis[b]	
		3. Management of miscarriage or incomplete abortion and postabortion care[b]	
		4. Antibiotics for pPRoM[b]	
		5. Management of chronic medical conditions (hypertension, diabetes mellitus, and others)	
		6. Tetanus toxoid[b]	
		7. Screening for complications of pregnancy[b]	
		8. Initiate antenatal steroids (as long as clinical criteria and standards are met)[b]	1. Antenatal steroids[b]
		9. Initiate magnesium sulfate (loading dose)[b]	2. Magnesium sulfate[b]
		10. Detection of sepsis[b]	3. Treatment of sepsis[b]

Essential Interventions for Maternal & Newborn Health

			4. Induction of labor postterm[b] 5. Ectopic pregnancy case management[b] 6. Detection and management of fetal growth restriction[b]
Delivery (woman)	8. Management of labor and delivery in low-risk women by skilled attendant[b]	11. Management of labor and delivery in low-risk women (BEmNOC) including initial treatment of obstetric and delivery complications prior to transfer[b]	7. Management of labor and delivery in high-risk women, including operative delivery (CEmNOC)[b]
Postpartum (woman)	9. Promotion of breastfeeding[b]		
Postnatal (newborn)	10. Thermal care for preterm newborns[b] 11. Neonatal resuscitation[b] 12. Oral antibiotics for pneumonia[b]	12. Kangaroo mother care[b] 13. Injectable and oral antibiotics for sepsis, pneumonia, and meningitis[b] 14. Jaundice management[b]	8. Full supportive care for preterm newborns[b] 9. Treatment of newborn complications, meningitis, and other very serious infections[b]

Source: Black, R., R. Laxminarayan, M. Temmerman, and N. Walker, editors. 2016. *Reproductive, Maternal, Newborn, and Child Health. Disease Control Priorities*, third edition, Volume 2. Washington, DC: World Bank.

Maternal Newborn Package

- Provides many interventions for maternal, newborn and child health resulting in large effects on all mortality outcomes
- 2, 607,000 deaths would be averted,
  - including 781,000 stillbirths,
  - 139,000 maternal deaths,
  - 1,682,000 neonatal deaths

Maternal Newborn Package

- For maternal deaths,
  - 67.1% could be averted with the PHC Platform and
  - nearly all of the remaining avertable deaths (21.1%) with hospital care.

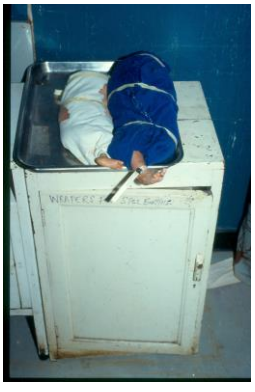
- For neonatal deaths,
  - 46.3% possible to avert with the Community Platform,
  - an additional 20.8% with the PHC Platform and
  - 32.9% with hospital care.

The interventions with the largest effects are labour and delivery management in all three platforms

Maternal Newborn Package

For stillbirths,

- 16.5% could be averted with the Community Platform,
- 44.5% with the PHC Platform, and
- an additional 35.8% in hospitals.



Interventions to Reduce Stillbirths and Newborn Morbidity and Deaths

- Folic acid to prevent neural tube defects
- Multiple micronutrients in pregnancy to reduce fetal growth restriction and preterm delivery (zinc)
- Prevent/treat maternal infections (e.g. tetanus, syphilis, malaria, HIV)
- Treat diabetes

Intrapartum and Neonatal Interventions

- Clean birth kits for home deliveries
- Antenatal corticosteroids for preterm labor if accurate measure of gestational age
- Antibiotics for preterm premature rupture
- Presumptive antibiotics if at risk of GBS?
- Thermal care of newborns at home and kangaroo mother care for LBW babies in HF
- Antibiotics for neonatal sepsis, pneumonia and meningitis

Essential Interventions in Reproductive Health

- Information and education on sexuality, nutrition, prevention of STIs, contraception, cervical cancer etc. by CHWs
- Immunizations ie. HPV and hepatitis B by Primary Health Centers (PHC) or CHW
- Provision of contraceptive services by CHW and PHC
- Management of complications of FGM, violence and of cervical cancer by PHC and hospitals

Lancet Article on RMNCH

Review

Reproductive, maternal, newborn, and child health: key messages from *Disease Control Priorities 3rd Edition*

*Robert E Black, Carol Levin, Neff Walker, Doris Chou, Li Liu, Marleen Temmerman, for the DCP3 RMNCH Authors Group**

E-published: 9 April 2016

Available at:

http://press.thelancet.com/RMNCH.pdf

Quality of care in RMNCHealth

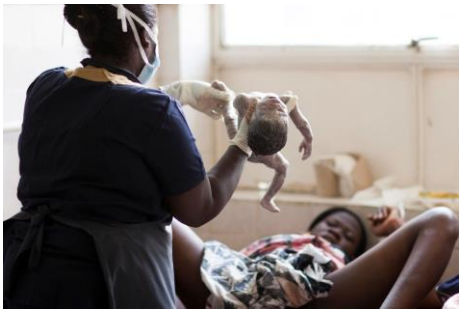
Tuncalp et al. Quality of Care for pregnant women and newborns- the WHO vision. BJOG 2015

Filename

Quality of care at Childbirth: a triple return on investment! Reducing Maternal and Newborn Mortality, preventing Stillbirths

QoC during childbirth in health facilities

- Indirect causes of maternal death are increasing (27.5% of maternal deaths), yet globally, over 70% of maternal deaths occur as a result of complications of pregnancy and childbirth such as haemorrhage, hypertensive disorders, sepsis and abortion.
- Complications of preterm birth, birth asphyxia, intrapartum-related neonatal death and neonatal infections together account for more than 85% of newborn mortality..



QoC during childbirth in health facilities

- Reflects the available physical infrastructure, supplies, management, and human resources with the knowledge, skills and capacity to deal with pregnancy and childbirth—normal physiological, social and cultural processes, but prone to complications that may require prompt life-saving interventions.
- It is necessary to go beyond maximising coverage of essential interventions to accelerate reductions in maternal and perinatal mortality and severe morbidity.
- Moreover, there is a complex interplay of experiences of mistreatment and lack of support that impact women's childbirth experiences and outcomes.

Based on the current evidence on burden and impact, specific thematic areas have been identified as high priority

- Essential childbirth care including labour monitoring and action and essential newborn care at birth and during the first week;
- Management of pre-eclampsia, eclampsia and its complications;
- Management of postpartum haemorrhage;
- Management of difficult labour by enabling safe and appropriate use of medical technologies during childbirth;
- Newborn resuscitation;
- Management of preterm labour, birth and appropriate care for preterm and small babies;
- Management of maternal and newborn infections.

QoC during childbirth in health facilities

- To end preventable maternal and newborn morbidity and mortality, every pregnant woman and newborn need skilled care at birth with evidence-based practices delivered in a humane, supportive environment.
- Good quality of care requires appropriate use of effective clinical and non-clinical interventions, strengthened health infrastructure and optimum skills and attitude of health providers, resulting in improved health outcomes and positive experience of women and providers. Moreover, quality of care is considered a key component of the right to health, and the route to equity and dignity for women and children.

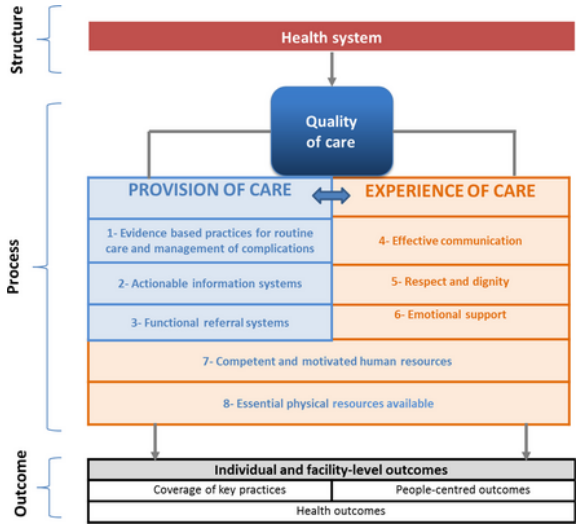
QoC during childbirth in health facilities

- So, what is quality of care?
- To underpin this vision, we need a common understanding of what it means. The WHO vision defines quality of care as 'the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care needs to be safe, effective, timely, efficient, equitable, and people-centred.
- Operational definitions for the characteristics of quality of care are defined

Operational definitions for the characteristics of QoC definition

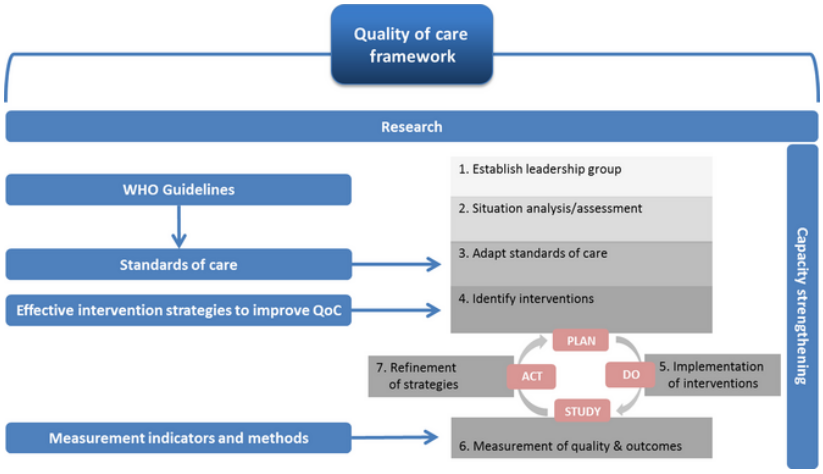
- *Safe*—delivering health care which minimises risks and harm to service users, including avoiding preventable injuries and reducing medical errors
- *Effective*—providing services based on scientific knowledge and evidence-based guidelines
- *Timely*—reducing delays in providing/receiving health care
- *Efficient*—delivering health care in a manner which maximises resource use and avoids wastage
- *Equitable*—delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location or socioeconomic status
- *People-centred*—providing care which takes into account the preferences and aspirations of individual service users and the cultures of their communities

Quality of care for pregnant women and newborns—the WHO vision



BJOG: An International Journal of Obstetrics & Gynaecology Volume 122, Issue 8, pages 1045-1049, 1 MAY 2015 DOI: 10.1111/1471-0528.13451
http://onlinelibrary.wiley.com/doi/10.1111/1471-0528.13451/full#bjo13451-fig-0001

Quality of care for pregnant women and newborns—the WHO vision



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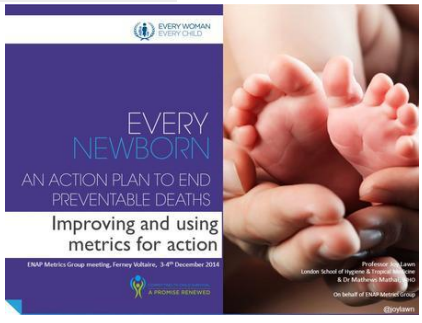
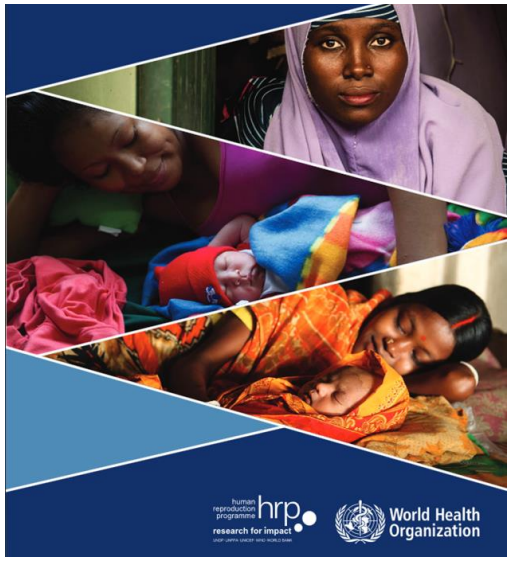
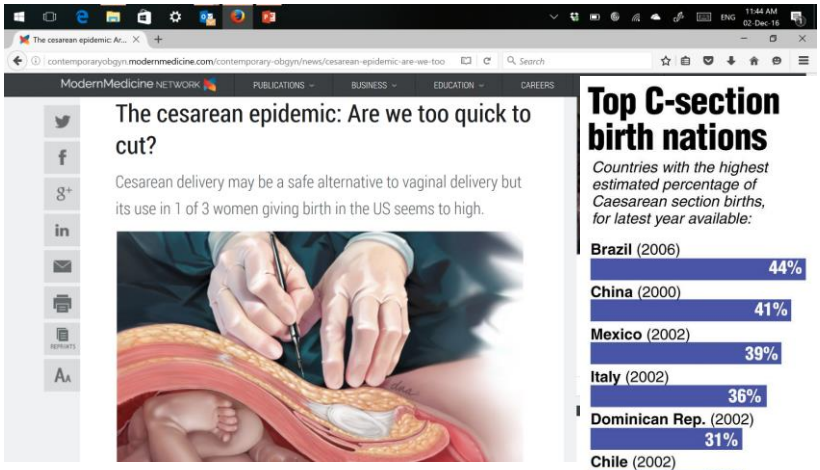
http://onlinelibrary.wiley.com/doi/10.1111/1471-0528.13451/full#bjo13451-fig-0002

Conclusion

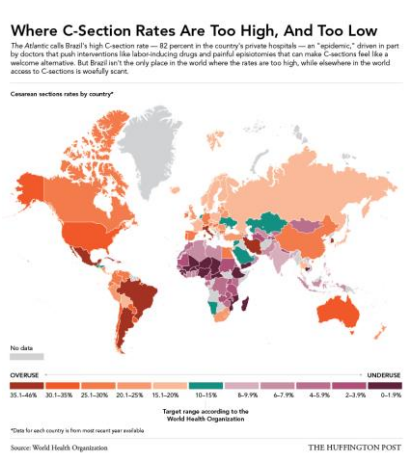
- In line with its organisational mandate (research, norms and standards, support for implementation, monitoring and evaluation), six strategic areas have been identified for WHO to contribute to ending preventable mortality and morbidity among mothers and newborns.
- The QoC definition and framework will inform this evidence-based and systematic approach to (1) research, (2) guideline development, (3) standards of care, (4) identification of effective intervention strategies for quality improvement, (5) development of monitoring indicators at global, national and facility levels, and (6) capacity strengthening for quality improvement research, measurement and programming.
- Work in these strategic areas will support the maternal and newborn QoC improvement strategy and ensure implementation based on robust data, while including targeted country-level capacity strengthening and technical support.

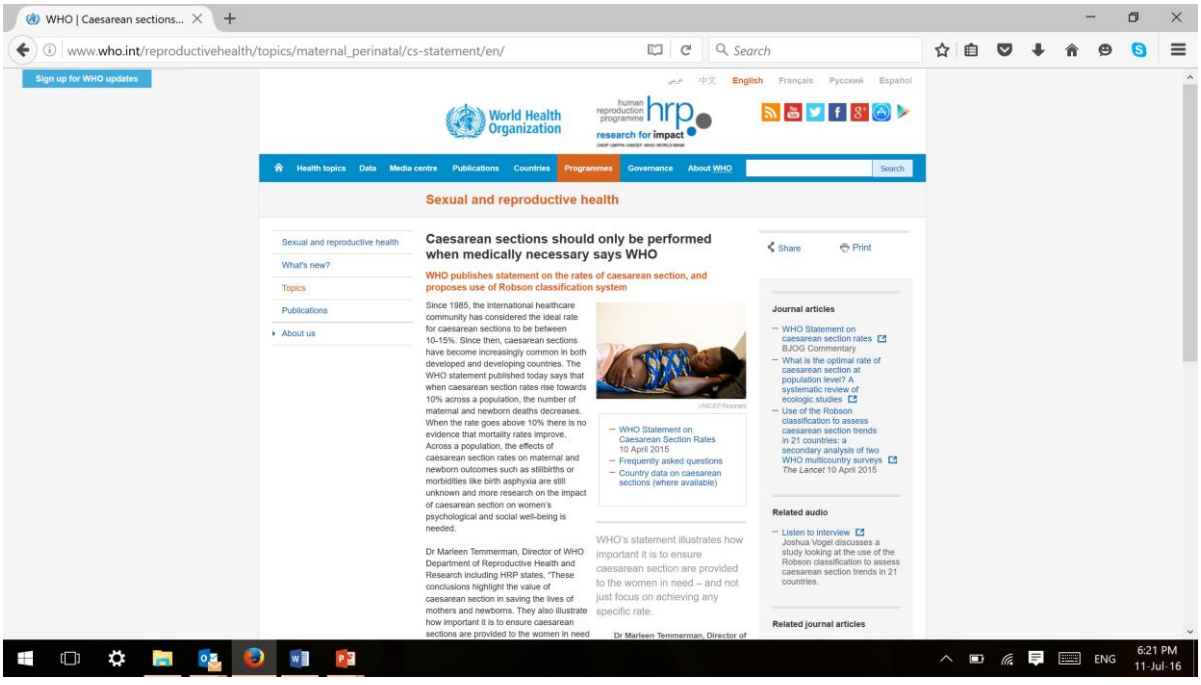


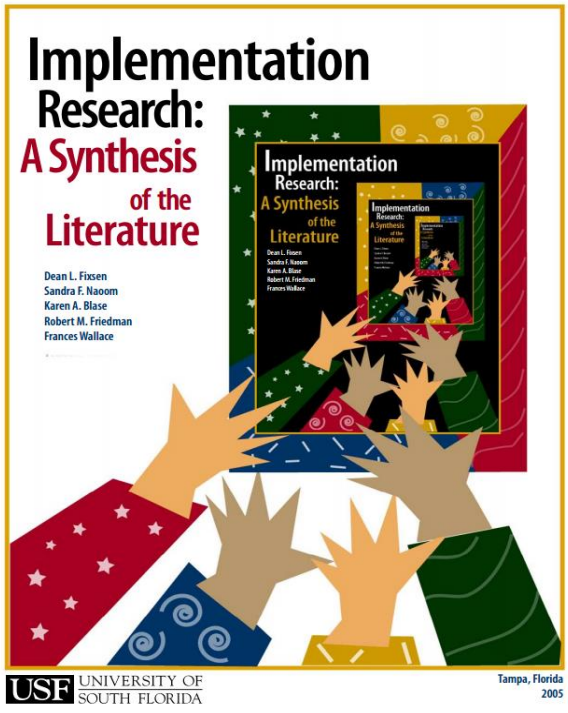



The cesarean epidemic: Are we too quick to cut?
Cesarean delivery may be a safe alternative to vaginal delivery but its use in 1 of 3 women giving birth in the US seems to high.

Top C-section birth nations
Countries with the highest estimated percentage of Caesarean section births, for latest year available:
Brazil (2006) 44%
China (2000) 41%
Mexico (2002) 39%
Italy (2002) 36%
Dominican Rep. (2002) 31%
Chile (2002) 31%
United States (2006) 31%
Portugal (2002) 30%
Malta (2003) 26%
Venezuela (2002) 25%
World (2002) 15%
© 2008 MCT
Source: World Health Organization, McClatchy Washington Bureau
Graphic: Judy Treible


Where C-Section Rates Are Too High, And Too Low
Cesarean sections rates by country*
No data
OVERUSE
UNDERUSE
Target range according to the World Health Organization
Source: World Health Organization
THE HUFFINGTON POST


WHO | Caesarean sections...
www.who.int/reproductivehealth/topics/maternal_perinatal/cs-statement/en/
Sign up for WHO updates
World Health Organization
research for impact
Sexual and reproductive health
Caesarean sections should only be performed when medically necessary says WHO
WHO publishes statement on the rates of caesarean section, and proposes use of Robson classification system
Journal articles
Related audio
Related journal articles



Formula for success

Effective Interventions ✖ Effective Implementation ✖ Enabling Contexts = Socially Significant Outcomes

River of Life: WHO

Getting to "How"

Implementation science = "Putting it in place"

Improvement science = "Making it better"

Getting to "How"

Systems Science = creating an enabling context

Implementation Research

Context plays a central role in implementation research. Context can include the social, cultural, economic, political, legal, and physical environment, as well as the institutional setting, comprising various stakeholders and their interactions, and the demographic and epidemiological conditions.

The intent is to understand what, why, and how interventions work in "real world" settings and to test approaches to improve them

*

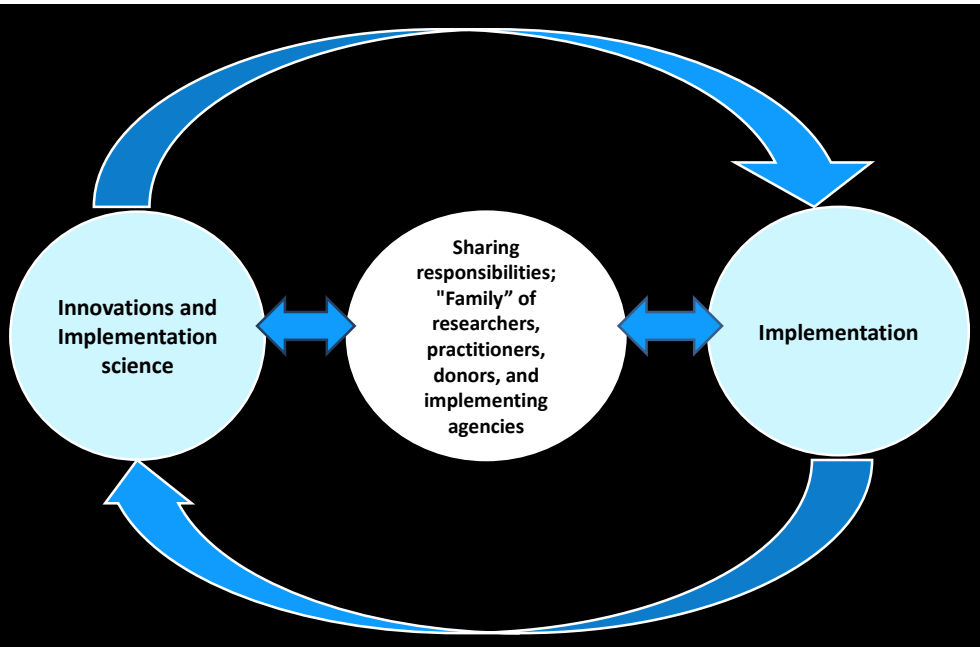
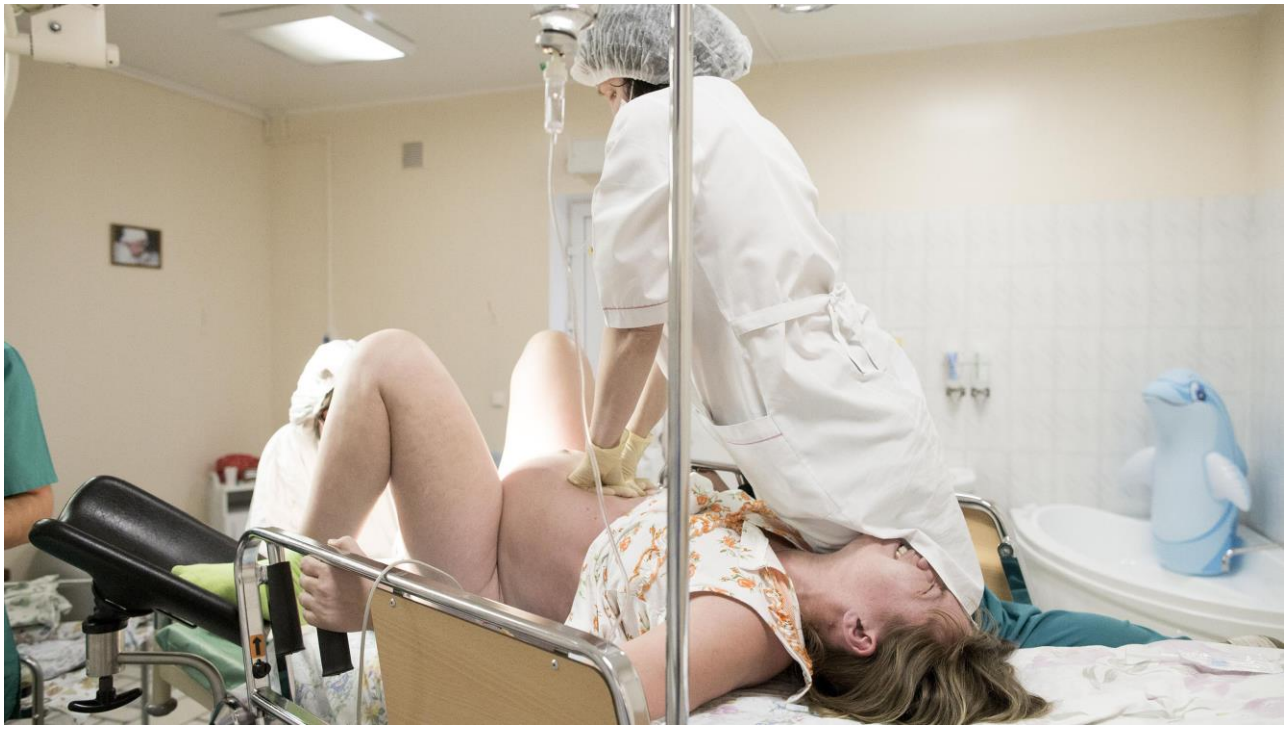
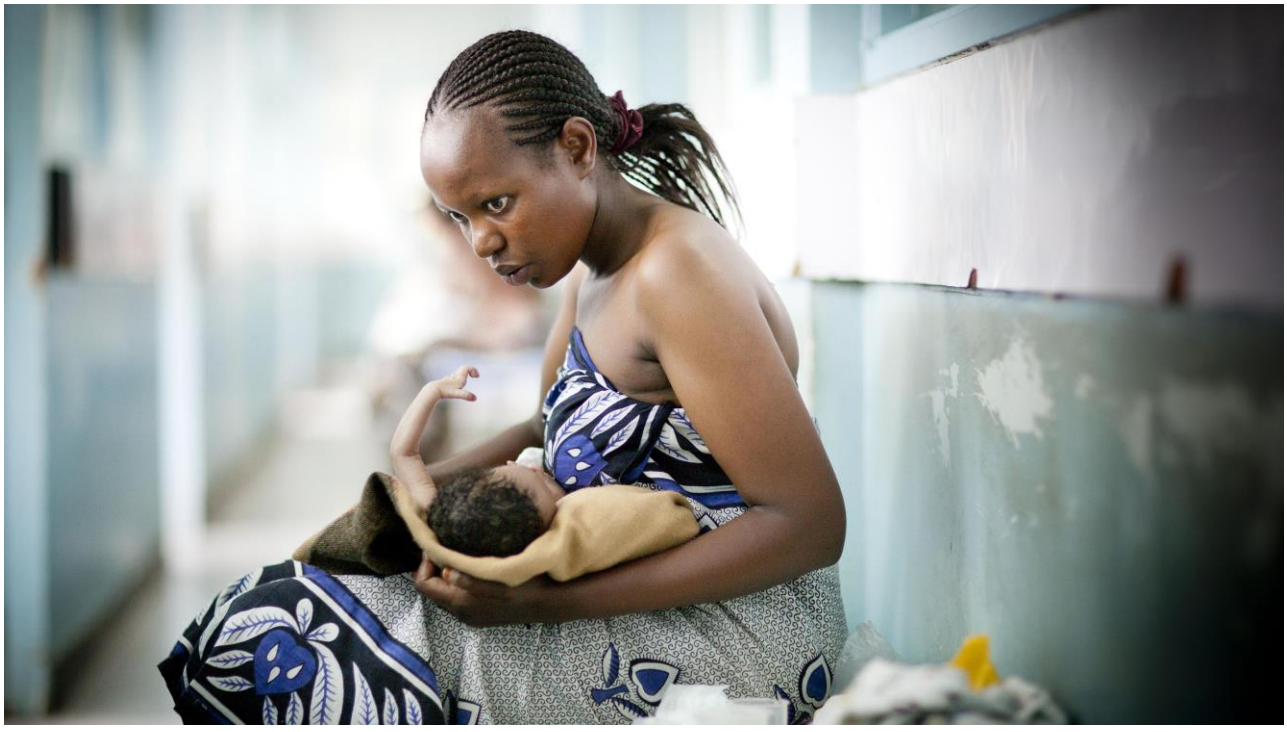


Figure 1 Using innovations and science to address challenges in implementing life-saving interventions for maternal and newborn health. This figure shares a common box with "Accelerating Science-Driven Solutions to Challenges in Global Reproductive Health: A New Framework for Moving Forward" (Obstet Gynecol 2011; 117:720-6).

Filename






L/WARD


WARD-3

Thank you

Please get involved. Further information available at the Every Woman Every Child website:
ww.everywomaneverychild.org

EVERY WOMAN
EVERY CHILD

Yes, we can, if we care!

" It takes two to make a child but a village to raise a child". We are all part of that global village!