Complications of Caesarean Section in Low- and Middle-income Countries (LMIC), A Systematic Review.

The Power of Evidence Synthesis

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Findings

Risk of maternal deaths who had CS

116 studies – 2933457 CS

7·6 / 1000 procedures

(95% CI 6·6–8·6, τ2=0·81)

Sub-Saharan Africa : highest burden

(10·9 per 1000; 9·5–12·5, τ2=0·81)

A quarter women who died in LMICs

(72 studies, 27 651 deaths)

had undergone a caesarean section

(23·8%, 95% CI 21·0–26·7; τ2=0·62).

Findings

Maternal deaths and perinatal deaths following CS are disproportionately high in LMICs

THE TIMING AND URGENCY OF CS POSE MAJOR RISKS.

OVERVIEW

- Clinical Challenges
- Universal Access
- Safety in CS

- Too Much Too Soon
- Too Little Too Late
- Combination of Both

Limitations

- Training
- Surgeon
- Anaesthetist
- Theatre Staff
- Sepsis Detection
- Skills in instrumental delivery

- Infrastructure
- Transport Delays
- Transfusion
- Health Care Facilities
- Lack of AN pathways
- Lack of resources

- EMCS 2nd stage in labour
- 2x ↑ maternal deaths than EL. LSCS
- 2nd stage advanced stage
- 12x↑ in maternal deaths than early in labour
- 9x ↑ losing a baby in the 2nd stage of labour
- No differences in maternal deaths in non physician operators
- Perinatal deaths ↑in non physicians

PPH - maternal deaths	32%
Pre-eclampsia	19%
Sepsis	22%
Anaesthesia related	14%

Implications

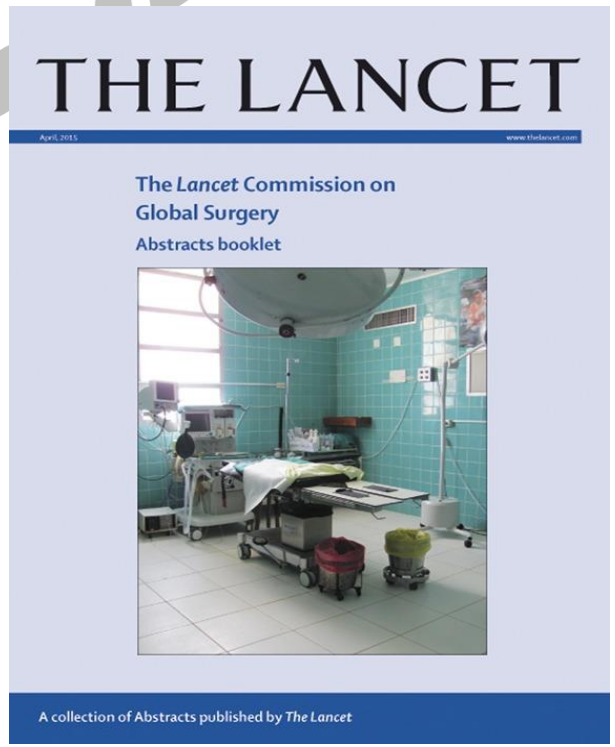
- 99% of maternal deaths LMIC
- ↓ CS ↑maternal deaths
- Improved access
- Evidence based training labour management
- Monitoring agreed indications for need
- Robsons' Classifications
- Multidisciplinary training

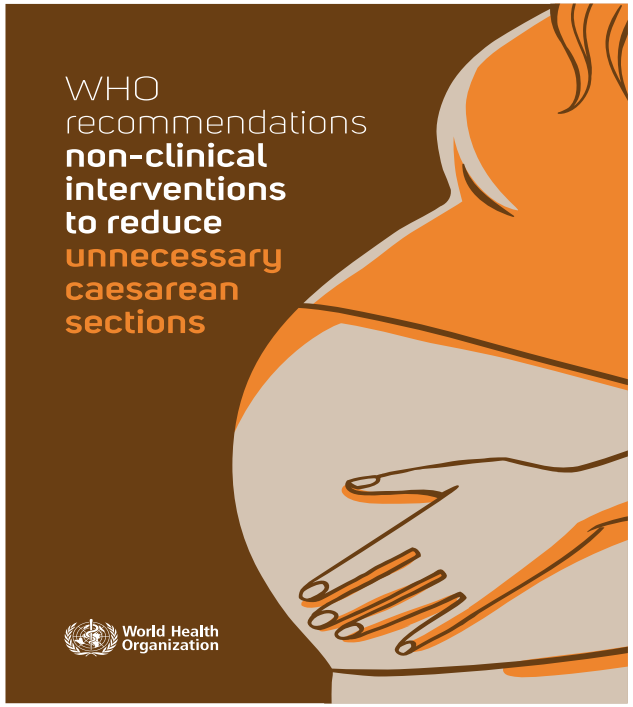
Implications

- Skills training for instrumental births
- Multidisciplinary Obstetric and Midwifery Simulation training
- Managements Post Partum Haemorrhage
- Neonatal resuscitation skills

Next Steps

- Prioritization
- Resource Investments
- Policy Focus on Obstetric Surgery
- How to make it safe





- Increase access to C Sections
- Referral pathways
- Safe Procedures
- Improved training
- Role of task shifting
- Professional Midwives

"Midwifery is a vital solution to the challenges of providing **high-quality maternal and newborn care** for all women and newborn infants, **in all countries**"

EFFECT

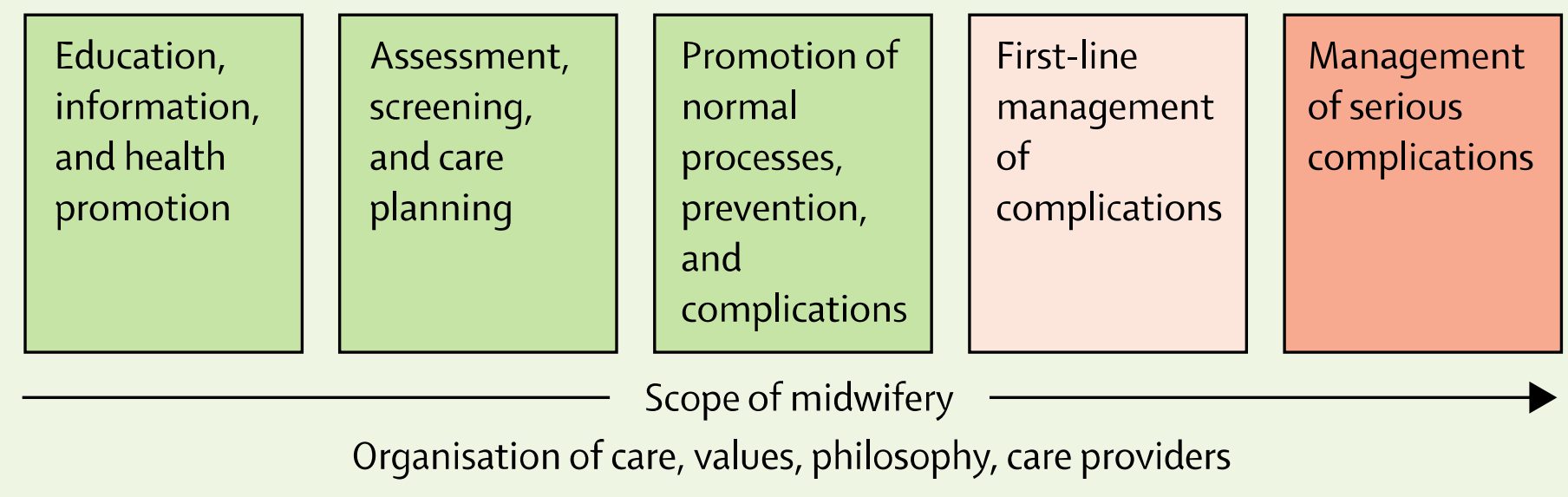
Universal implementation of midwifery could reduce maternal and newborn mortality and stillbirth by over

80%

Midwifery 1

Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care

Mary J Renfrew, Alison McFadden, Maria Helena Bastos, James Campbell, Andrew Amos Channon, Ngai Fen Cheung, Deborah Rachel Audebert Delage Silva, Soo Downe, Holly Powell Kennedy, Address Malata, Felicia McCormick, Laura Wick, Eugene Declercq



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TRIPLE RETURN

There is a "Triple Return on Investment" by focusing on the time of labour and birth, with the potential to av

- **46% of all maternal deaths**
- **40% of all stillbirths**
- **40% neonatal deaths**

(Lancet, Every Newborn Series, May 2014)

This is the reason why skilled care on the day of birth is among the most impactful interventions.

Train the Trainer
Multidisciplinary Obstetrics Maternity Skills (MOMs)

FACULTY	
Midwives	8
Doctors	3
UK Midwives	2
Delegates	42

Policy implications

Raise awareness that unnecessary CS have serious consequences LMIC – safety not to be taken for granted

Improving timely access to facility

Appropriate decision-making

- Indications
- Local circumstances

Innovative strategies to optimize the use and quality of CS are urgently needed – it is not enough to simply increase the “numbers”

- Surgical technique
- task-shifting
- Enabling environment
- Training and supervision
- Communication
- Team-work

We need to reinvigorate vaginal delivery:

- “Ugly ducking”
- Respectful care for a fulfilling and positive experience
- Alternatives that are safe and acceptable

Research gaps

Before decision-making

- ✓ How to deal with misconceptions – education and communication for birth
- ✓ How to address the overuse and the underuse simultaneously – appropriateness
  - ✓ Reliable, reproducible classification of indications for CS
- ✓ How to implement interventions to maximize the effectiveness – implementation research
- ✓ How to reinvigorate assisted vaginal delivery

After decision-making

- ✓ How to improve safety and quality of care
  - ✓ Effective training
  - ✓ Effective communication and team work