

# Caesarean sections; audit of indications and complications in a rural Tanzanian hospital

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Surgery in Low resource Settings, 15 november 2014

# Introduction



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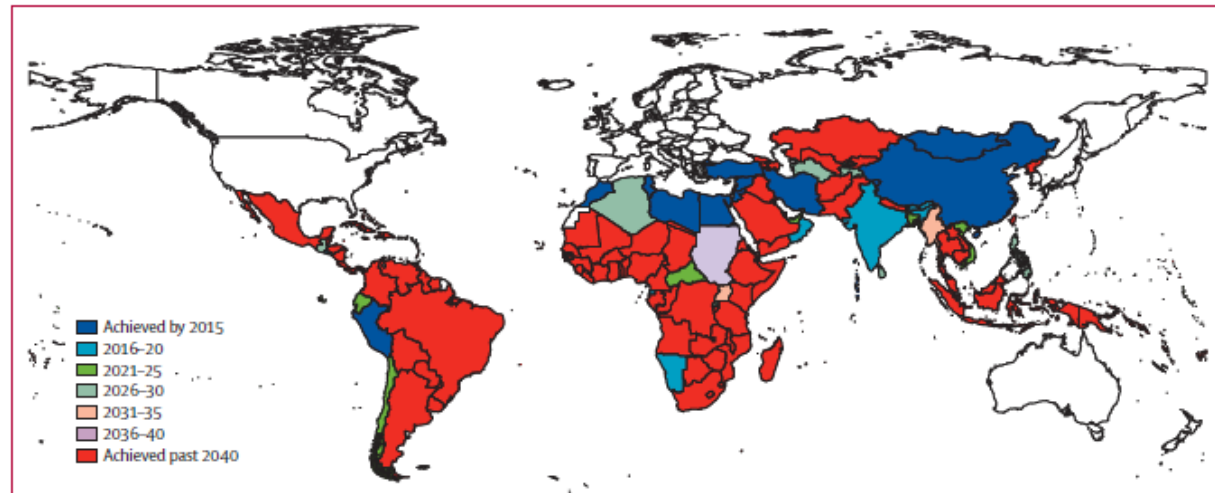
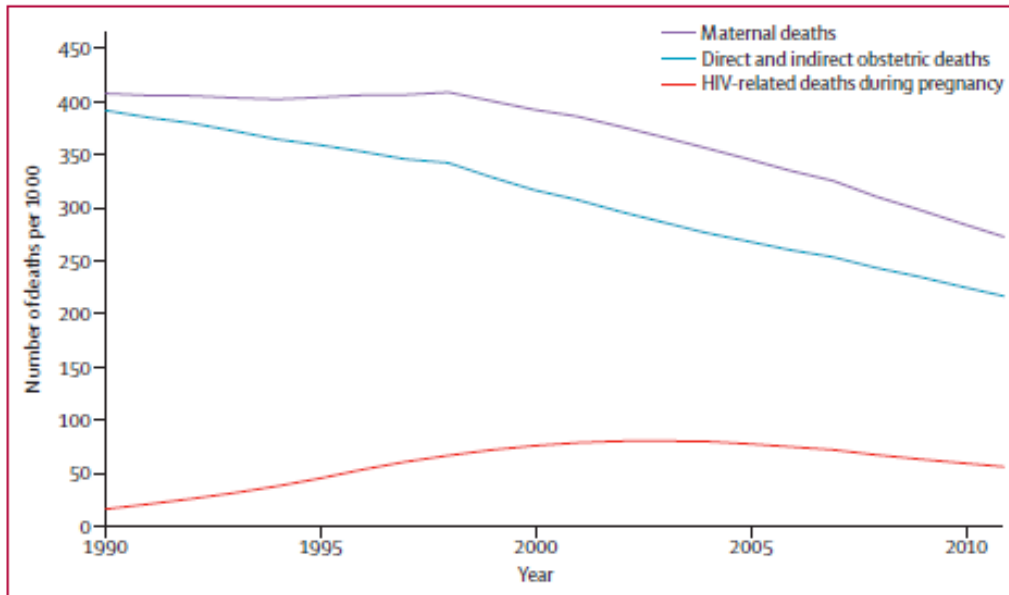


Figure 6: Millennium Development Goal 5 attainment year based on annualised rates of change, 1990–2011



# Introduction

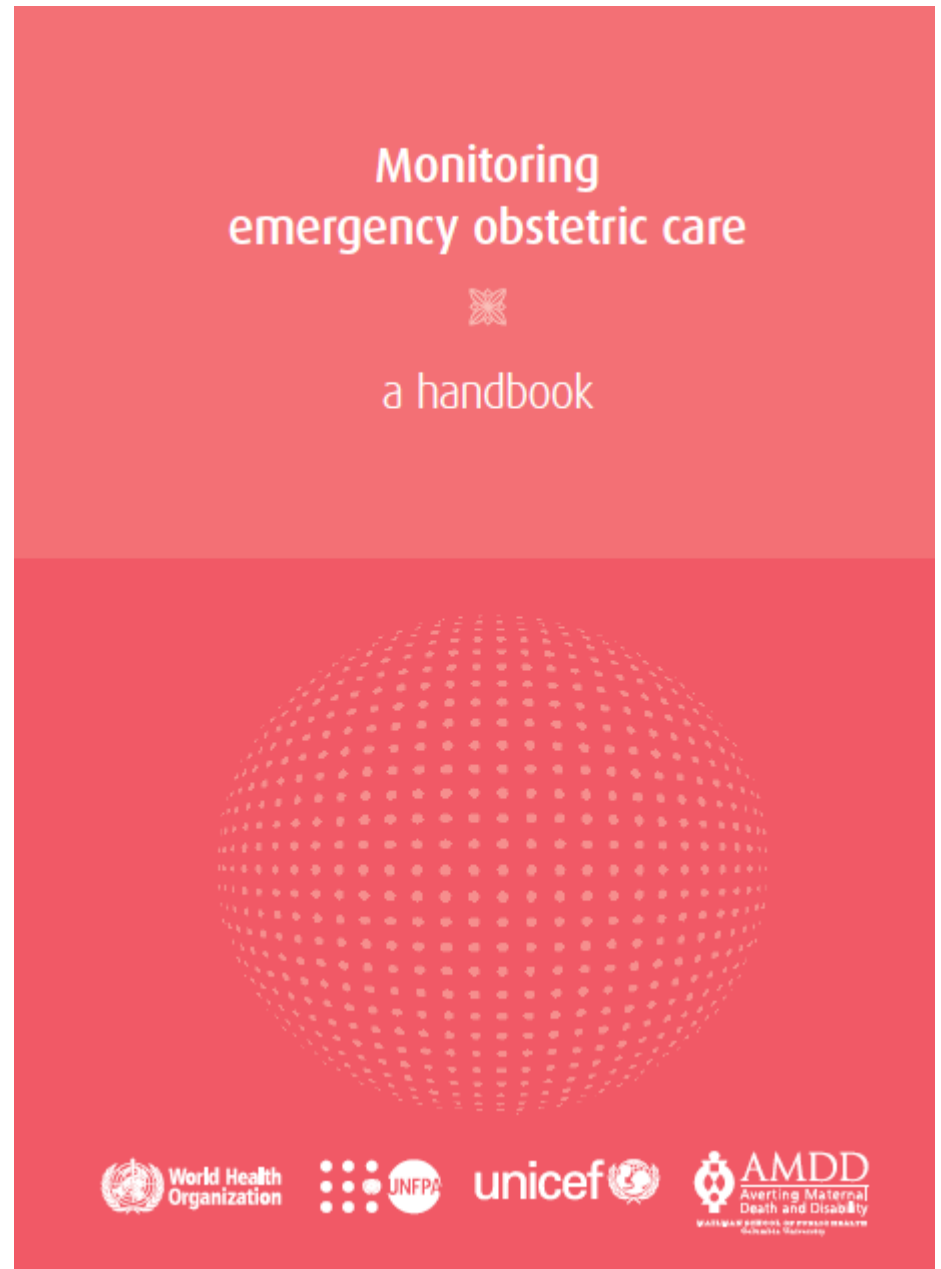
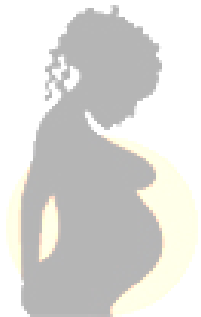
Proxy indicator: CS rate



Target of 5-15%



More CS



# CS in Sub-Saharan Africa

CS rate is rising

Unnecessary CS's

Too late

Women in need do not have access



# CS in Sub-Saharan Africa

CS rate is rising

Unnecessary CS's

Too late

Women in need do not have access

Quality of EmOC = CS rate?



# Introduction

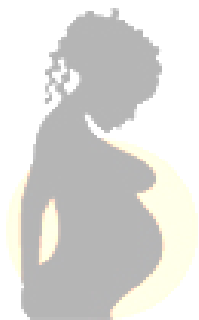
Prospective cross-sectional study: Maternal Near Miss (MNM) and Maternal Deaths (MD)

Nov 2009 - Nov 2011

Haydom Lutheran Hospital (HLH), Tanzania



Audit CS indications



# Haydom Lutheran Hospital (HLH) Tanzania

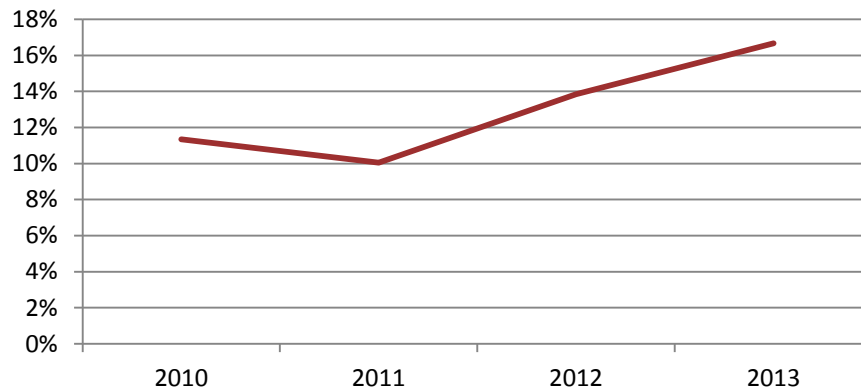




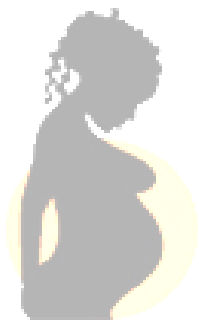
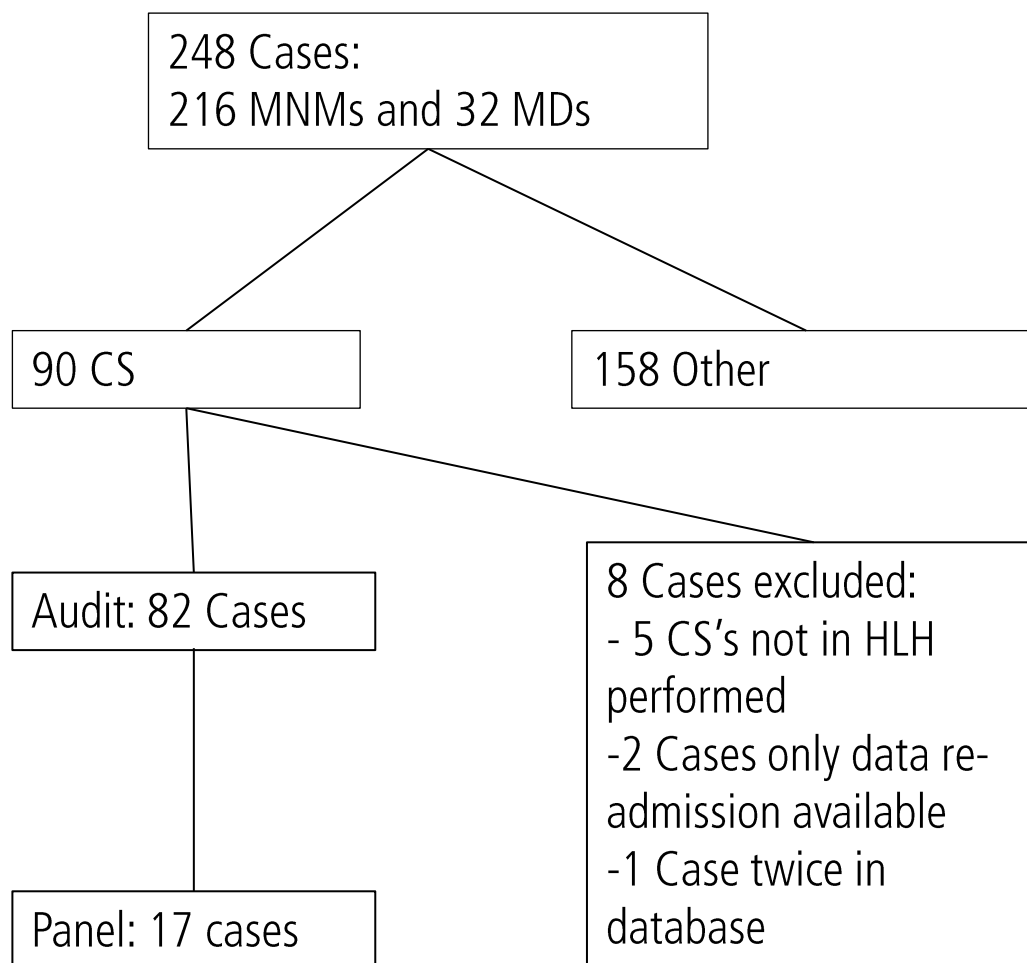
# Haydom Lutheran Hospital (HLH) Tanzania



**CS Deliveries**



# Data



# Clinical characters

## Age

< 20 yrs	8,5%
20-35 years	74,4%
> 35 yrs	17,0%

## Parity

0	20,7%
1-2	25,6%
>3	52,4%
unknown	1,2%

## Previous CS

0	61,0%
1	29,3%
2 or more	7,3%
unknown	2,4%

## Gestational weeks

24-36 wks	24,4%
> 36 wks	72,0%
unknown	3,7%

## Maternal outcome

MNM	92,7%
MD	7,3%

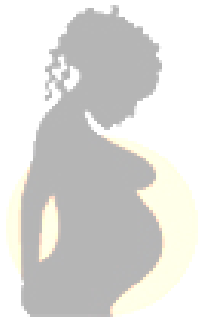
## Fetal outcome (n=83)

Live births	63,9%
FSB	18,1%
MSB	7,2%
Neonatal death	7,2%
Unknown	3,6%

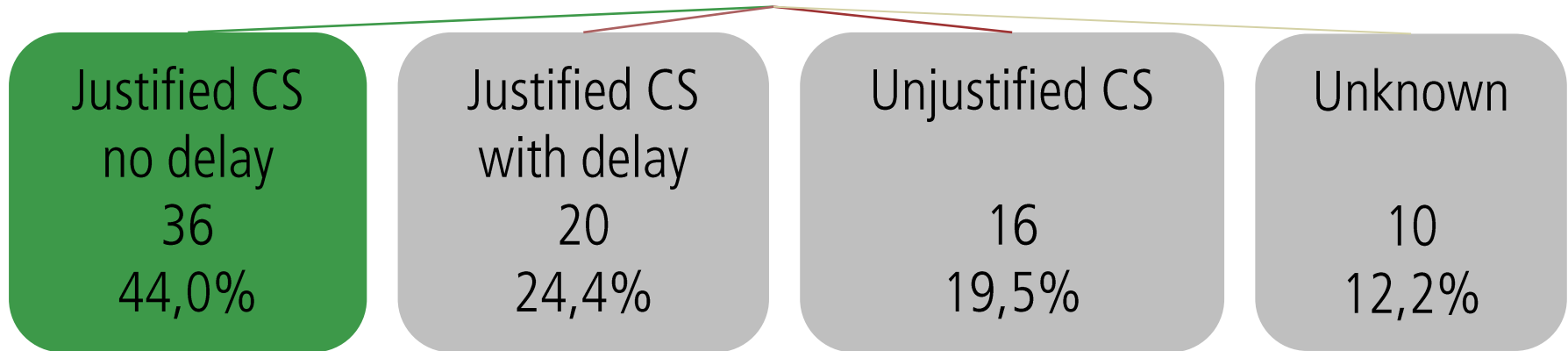


## 82 CS: Indications

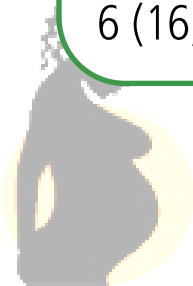
APH	19	(23,2%)
Fetal distress	14	(17,1%)
Uterine rupture	13	(15,9%)
Obstructed labour	11	(13,4%)
Previous CS	8	(9,8%)



# Audit



13 (36,1%)	APH
6 (16,7%)	Uterine rupture
6 (16,7%)	Fetal distress
5 (13,9%)	Previous CS
6 (16,7%)	Other



# Audit

Justified CS  
no delay  
36  
44,0%

Justified CS  
with delay  
20  
24,4%

Unjustified CS  
16  
19,5%

Unknown  
10  
12,2%

6 (30%)	Fetal distress
5 (25%)	Uterine rupture
3 (15%)	Obstructed Labour
2 (10%)	APH
4 (20%)	Other

10	Delay ARM or oxytocine
7	Delay CS
1	Delay vacuum delivery
1	Delay BP monitoring
1	Delay FHR monitoring



# Audit

Justified CS  
no delay  
36  
44,0%

Justified CS  
with delay  
20  
24,4%

Unjustified CS  
16  
19,5%

Unknown  
10  
12,2%

6 (37,5%)	'Obstructed labour'
3 (18,8%)	1 previous CS
2 (12,5%)	IUFD
1 (6,3%)	Malpresentation
1 (6,3%)	APH
1 (6,3%)	Fetal distress
1 (6,3%)	BOH
1 (6,3%)	Hypertensive disorder

6	No vacuum delivery
3	No ARM or oxytocine
1	Action line not crossed
2	Scar pain
2	No destructive labour
1	Labour not induced
1	Face presentation

# Should we care?



All future deliveries in hospital?





# Why?



Lack of human resources





**PARTOGRAPH**

**Fetal heart rate**  
80 100 120 140 160 180 200

**Amniotic fluid Moulding**

**Cervix (cm)**  
1 2 3 4 5 6 7 8 9 10

**Descent of head**

**Hours**  
Time

**Latent phase**  
**Active phase**  
**Action**

**Contractions per 10 mins**  
1 2 3 4 5

**Oxytocin U/L drops/min**

**Drugs given and iv fluids**

**Pulse and BP**  
60 80 100 120 140 160 180

**Temp °C**

**Urine**  
protein  
acetone  
volume

Handwritten notes: "Pinger 500mg", "Add 100mg of 10% saline 2.5g/ml"



# Discussion

CS Audit Tanzania:

Maaloe et al. 2012

26% unjustified CS,  
38% unclear indication

Dekker, Nyamtema et al. 2014

44% unjustified CS

Our study:

Only MNMs and MDs included

Leading indication: APH





# Conclusion

In our population with severe maternal outcome:

20% had unnecessary CS

25% delay using key evidence-based interventions  
or performing CS

CS rate is not a useful tool to monitor quality of emOC





SYMPOSIUM  
SURGERY IN LOW RESOURCE SETTINGS  
NOVEMBER 14TH-16TH 2014

WHAT  
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