

innovating to save lives



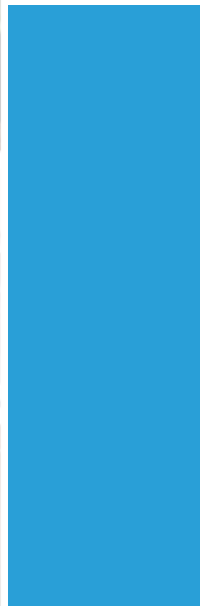
an affiliate of Johns Hopkins University

**Global Maternal Newborn Health
Conference**

19 October 2015

Mexico City, Mexico

Integration of care for mothers and babies at birth to prevent and manage PPH and birth asphyxia: A facility based approach to improving care



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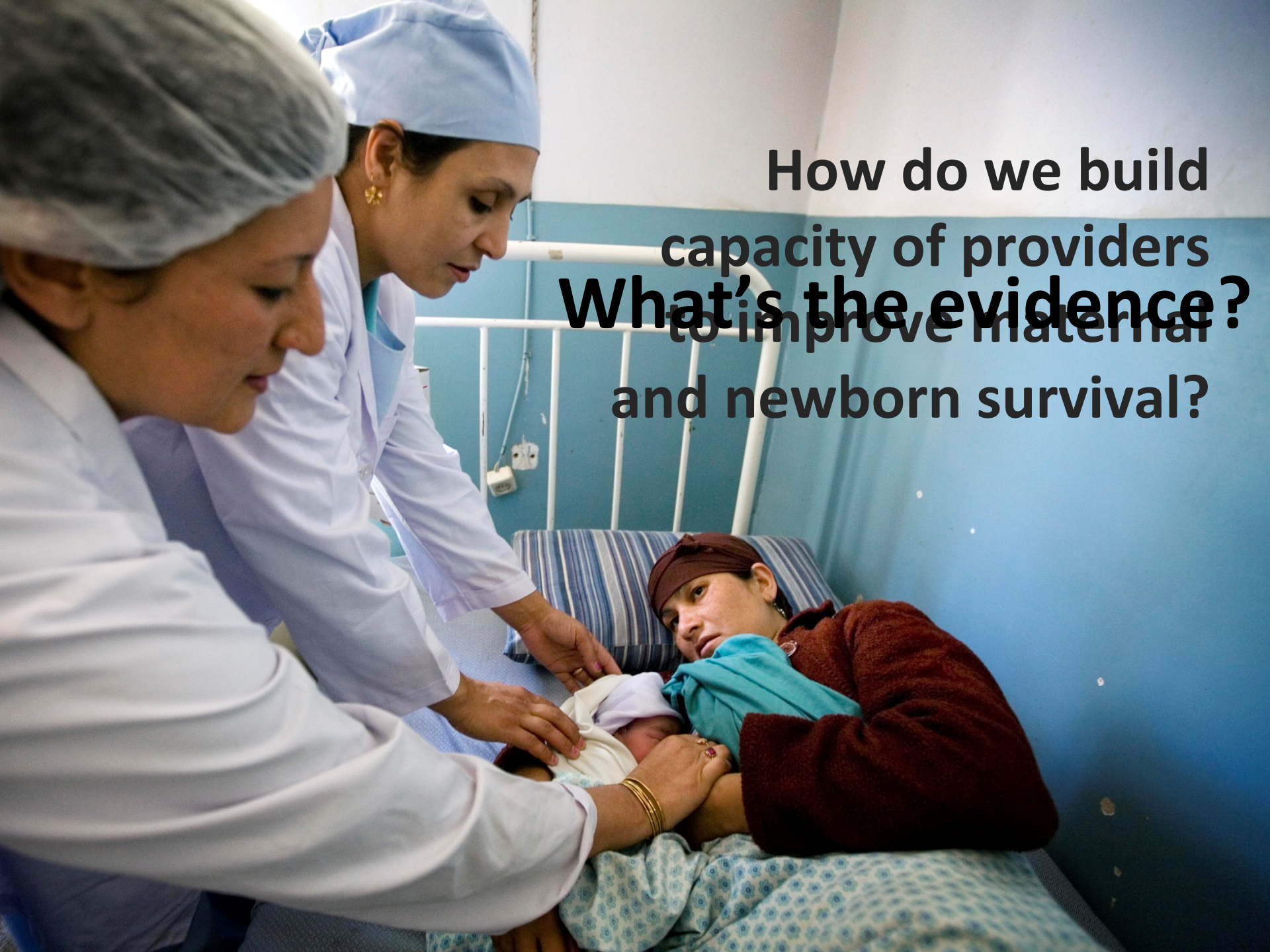
EVERY DAY:

**Nearly 800 women die due
to pregnancy-related
complications**

**And over 8000 newborns
also die**



How do we build
capacity of providers
What's the evidence?
to improve maternal
and newborn survival?





Literature shows we need LESS...

- Off-site
- Single, lengthy training
- Passive learning
- Limited practice & feedback

And we need MORE...

- Onsite, shorter & more frequent
- Interactive learning
- Practice & immediate feedback





- Target limited # of providers from different facilities

- Off-site training

Traditional Training Approaches

- Heavily lecture-based

- Limited opportunities for active learning

- Limited or no follow up



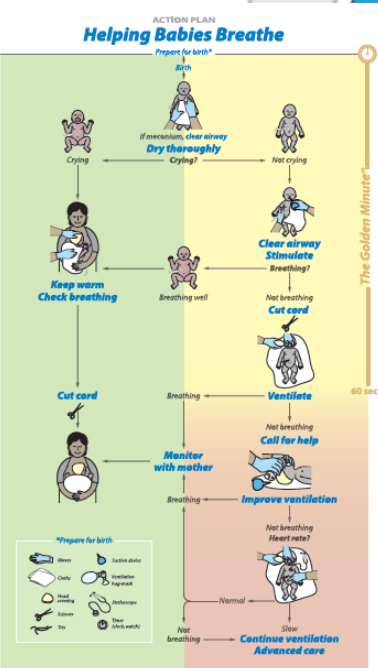
**Train providers
where they
deliver women**



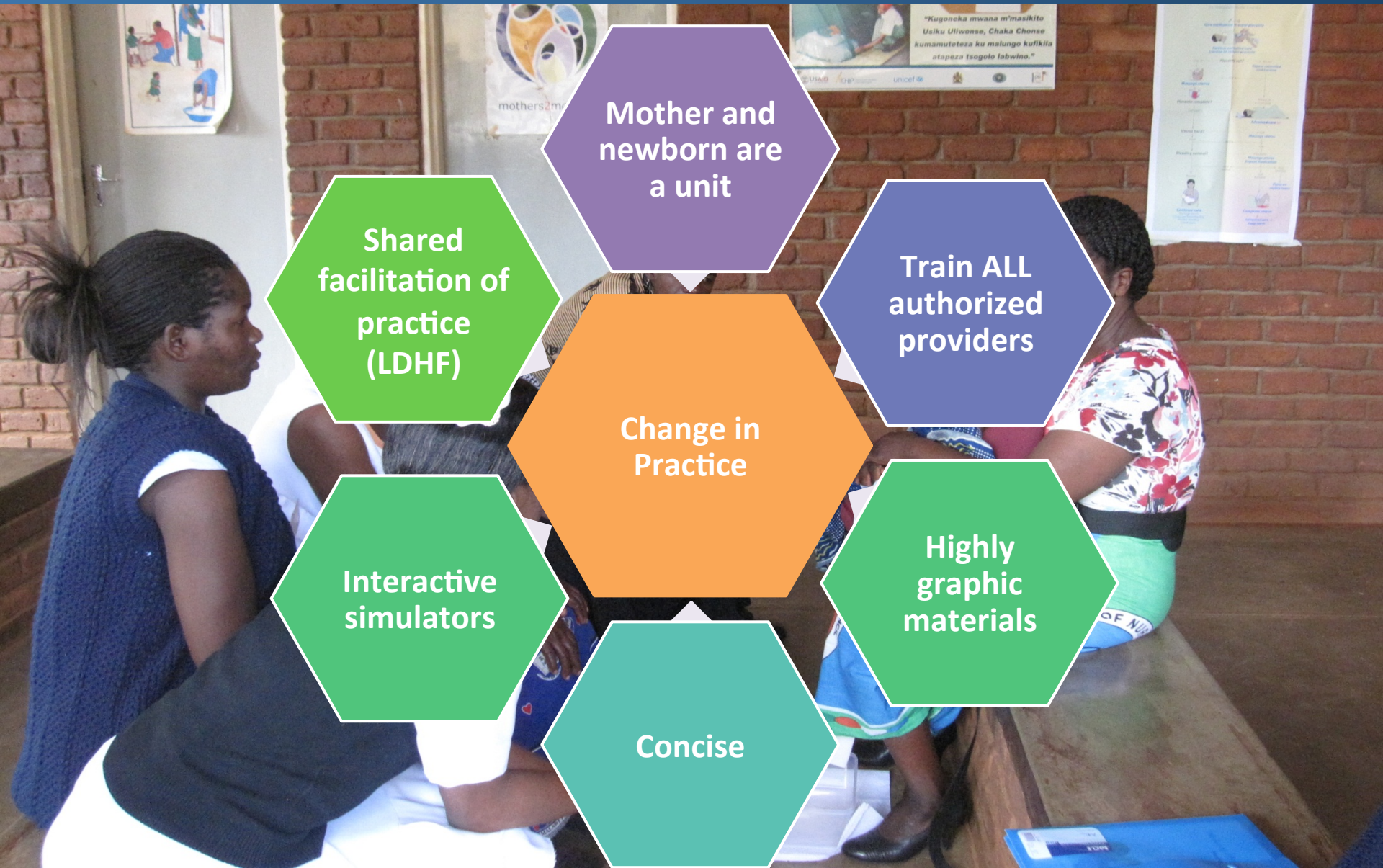
Helping Babies Breathe

Helping Mothers Survive

Bleeding After Birth



Capacity Building Concept



**Mother and
newborn are
a unit**

**Shared
facilitation of
practice
(LDHF)**

**Train ALL
authorized
providers**

**Change in
Practice**

**Interactive
simulators**

**Highly
graphic
materials**

Concise



Modular design and simple 1-day training lends itself to easy integration into existing programs

Evidence for Helping Mothers Survive?

- 2012: 3 country field validation
 - Acceptability & transfer of learning
- 2014: Impact?
 - Provider performance
 - Health outcomes



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American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™



Saving Lives on the Day of Birth:

Building and Sustaining Capacity of Frontline Health Workers in Uganda

P.I. Dr. Cherrie Evans, Jhpiego

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Saving Lives on the Day of Birth:

Building and Sustaining Capacity of Frontline Health Workers in Uganda

Integrating capacity building for MNH

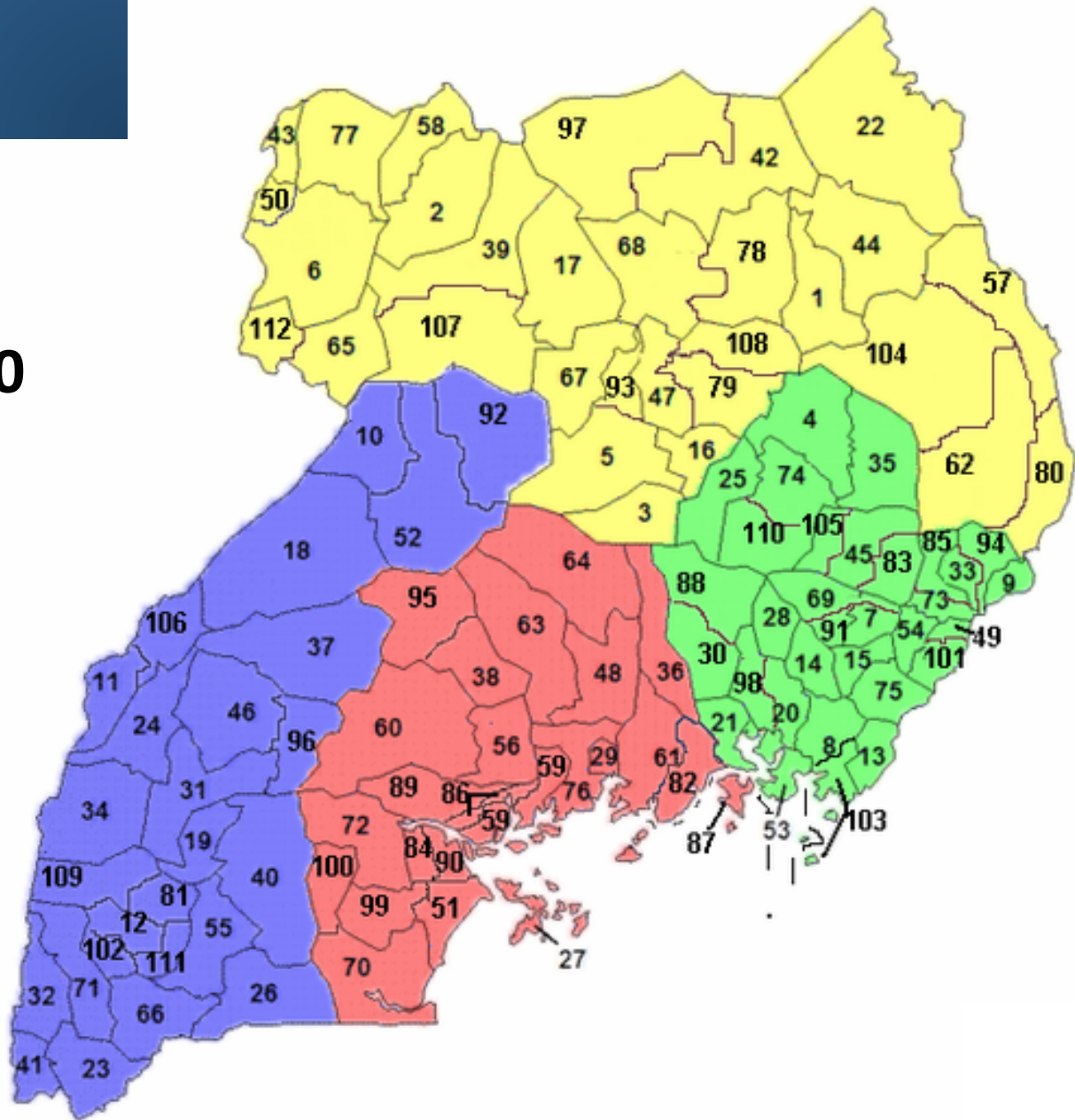
“Low dose, high frequency” approach to reinforcing and maintaining skills that is **integrated, ongoing, whole team-based, and facility-based** in remote health facilities to equip and increase the confidence of providers at every birth in managing PPH and neonatal asphyxia.

May 2013 – May 2016

Uganda

MMR – 438/100,000

NMR – 27/1000



Objectives

Overall Study:

- **Decrease mortality** – early newborn/stillborn and PPH case fatality
- **Improve routine care & timely care** for PPH and asphyxia
- Improve facility readiness and provider competencies
- **Increase provider practice on simulators** to consolidate learning

This Session:

- Training day knowledge and skills
- Provider simulated practice after intervention by study arm
- Comparison before/after intervention of:
 - provider performance of routine/preventive interventions during deliveries
 - HMIS data

Methods

- Multiple-intervention, cluster randomized controlled trial, non inferiority design
- 3 study arms with random assignment of districts to the arms
- 23 data collection instruments
 - Paper based
 - Tablet – with time stamps

3 Study Arms

Intervention	Study Group
1 day, facility based, simulation team training Followed by prescribed simulation practice for each: <ul style="list-style-type: none">• HMS - Bleeding after Birth – uterotonic backfill• HBS - Helping Babies Breathe – bag and mask	1, 2, 3
Clinical Mentor onsite	2, 3
Telephone support to Clinical Mentor from District Trainer	3

Uganda

12 Districts

126 Health Facilities

Western

Ibanda

Kanungu

Kiryandongo

Kisoro

Rukungiri

Sheema

Eastern

Bukedea

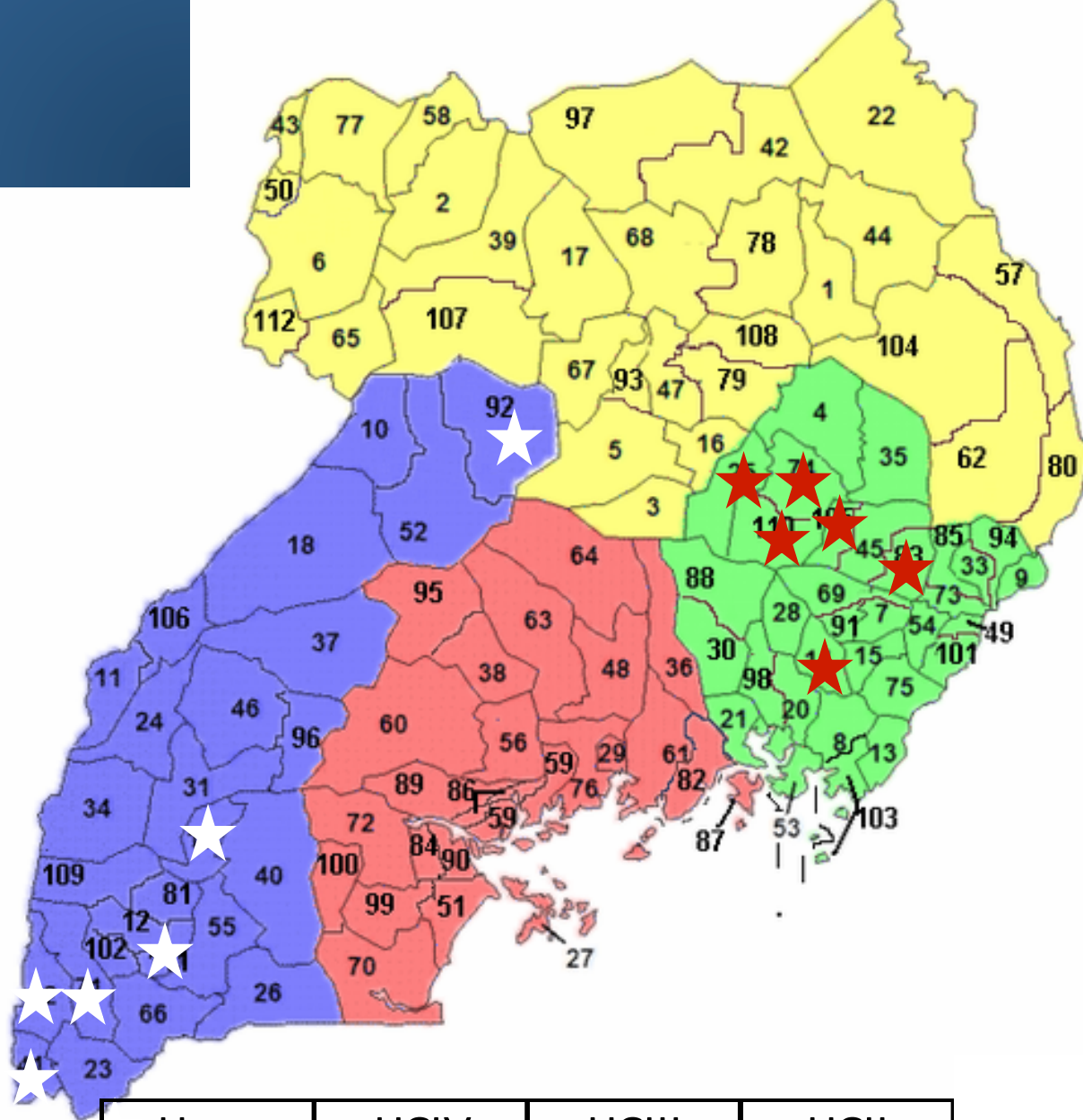
Kaberamaido

Namutumba

Ngora

Serere

Soroti



Hosp	HCIV	HCIII	HCII
11	21	80	17
0.09	0.16	0.62	0.13

Methods

- **Health Facility Assessment**
 - March-April 2014
 - 126 facilities (62% are Health Centers)
 - Assessors with structured checklist visited each facility over 2-3 days
- **Direct Clinical Observations** – 361 items - timestamps
 - 42 facilities with 1+ birth per day
 - Baseline: 435 laboring women; 441 newborns
 - Midline: 619 laboring women; 629 newborns
 - Observers were trained external providers using structured checklists

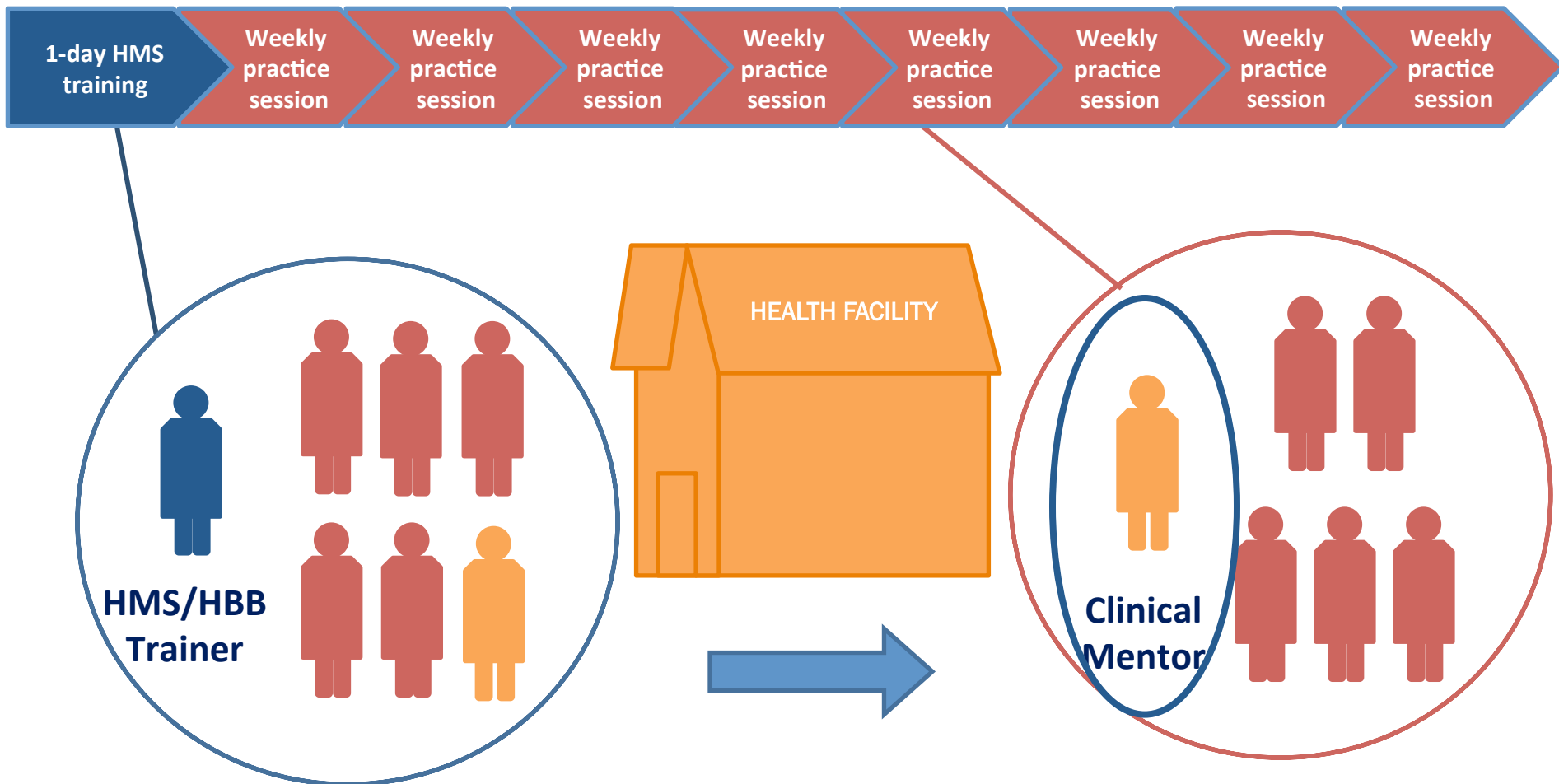
Methods

- **Training assessments** – *Knowledge and skills*
- **Service Delivery** – *Routine and supplemental registers*
- **LDHF Practice logs**
- **Qualitative study** – *FGD and interviews*
- **Ethical approvals received from:**
 - Johns Hopkins Bloomberg School of Public Health, Baltimore, MD USA
 - Makerere University School of Public Health in Kampala, Uganda
 - Uganda National Council For Science And Technology

Health Facility Interventions

- **Bleeding After Birth (BAB)**
 - District-led, 1 day training at health facility with simulator
 - Low-dose, high-frequency practice with simulator left on site for 8 weeks - with or without Clinical Mentor
 - Telephone support from district trainer – in full arm only
- **Helping Babies Breathe (HBB)**
 - 1 day training at health facility with simulator
 - LDHF practice with simulator left on site over 8 weeks
 - Telephone support from district trainer
- **Integrated LDHF practice (BAB+HBB)**
 - LDHF practice with integrated scenarios for 4 weeks

1-day training followed by LDHF practice after training



Results



12 districts

126 facilities (public & PNFP)

~ 755 providers

> 71,000 births

- 1. Learning new techniques in saving lives
- 2. Be prepared to pass skills
- 3. Learn facilitation skills
- 4. Learn ANSTL
- 5. Become a trainer
- 6. Know about S&TB
- 7. Phase of training

Results – Training Day Knowledge and Skills

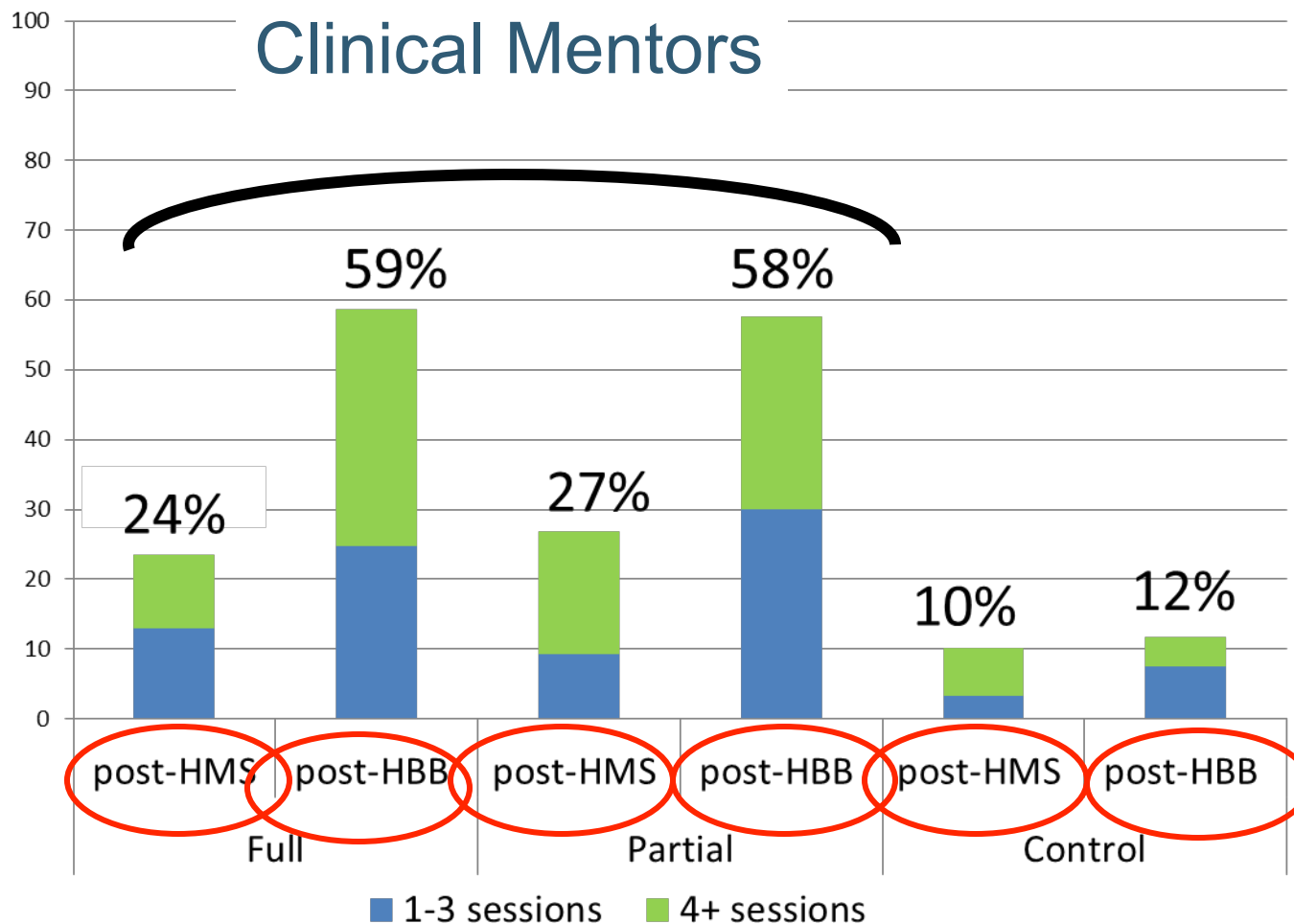
BAB: June – July 2014

Providers Trained	Total (n=410)
	%
Knowledge	
Passed pre-test	86
Passed post-test	98
OSCE - AMTSL	
Passed pre-test	9
Passed post-test	93

HBB: Sept – Oct 2014

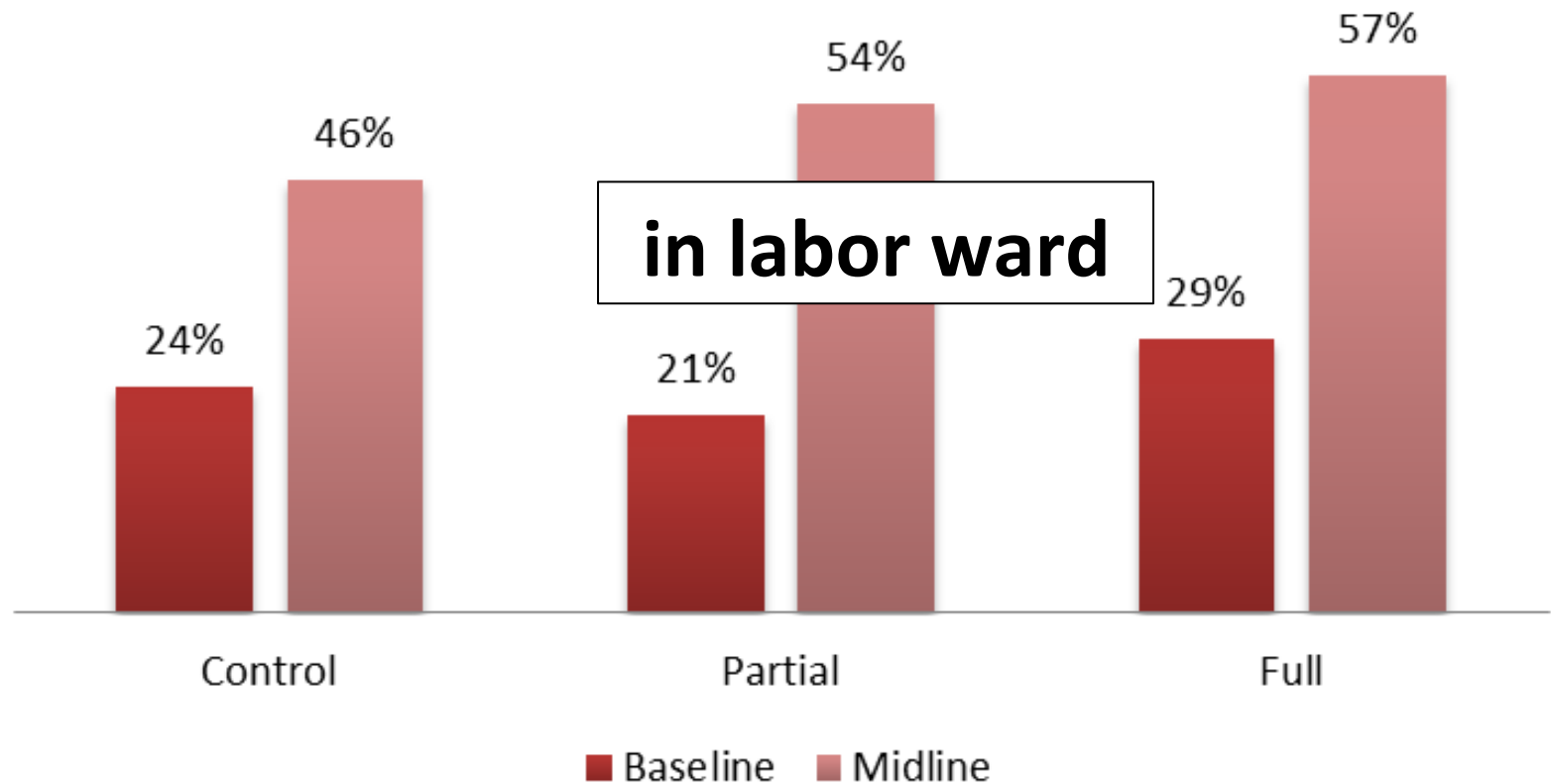
Providers Trained	Total (n=439)
	%
Knowledge	
Passed pre-test	88
Passed post-test	100
OSCE 'B'	
Passed pre-test	1
Passed post-test	79

Results – LDHF Practice



Results – Health Facility Assessment

Oxytocin refrigeration

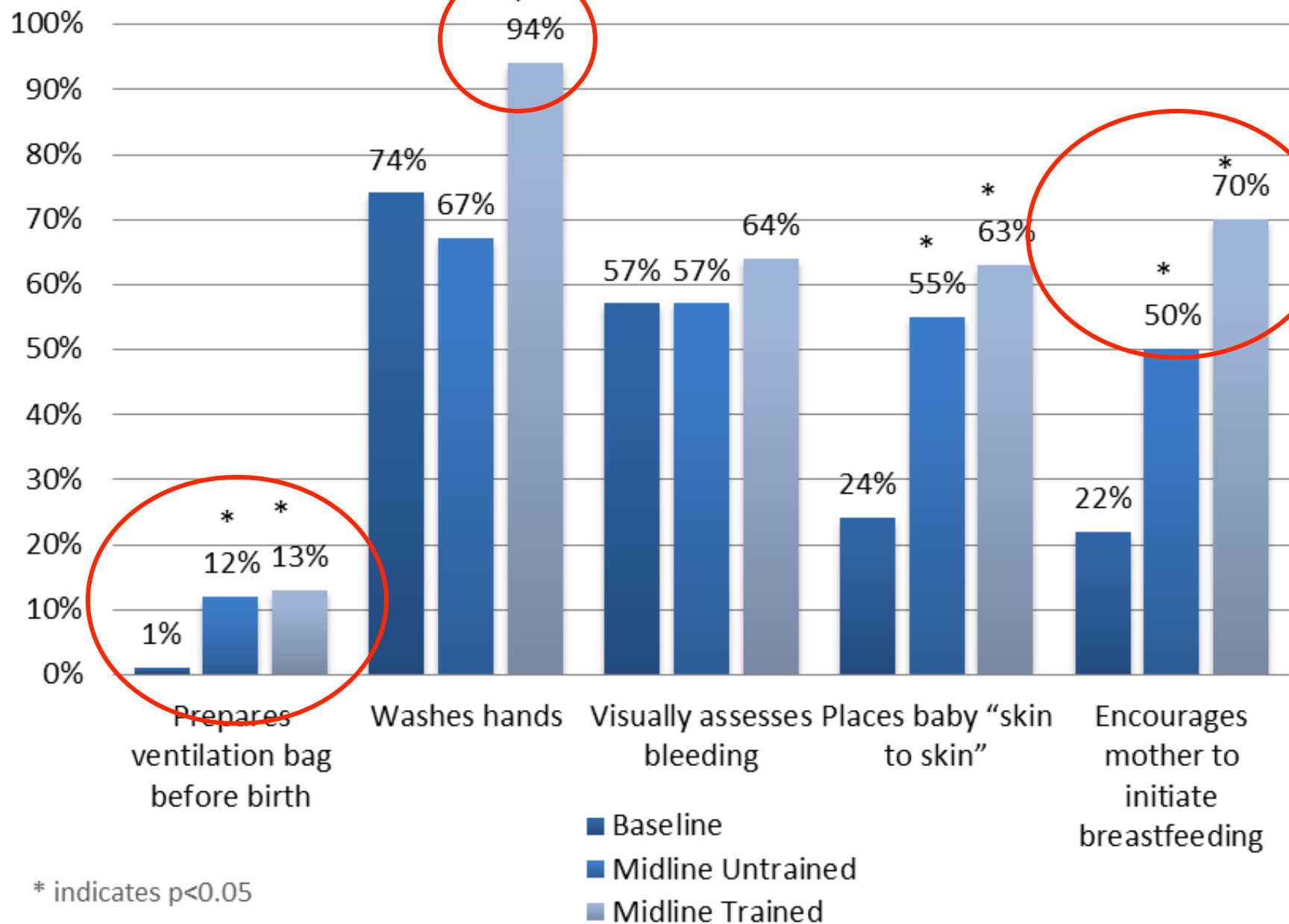


Directly observed observation of Birth and without mentoring support for practice

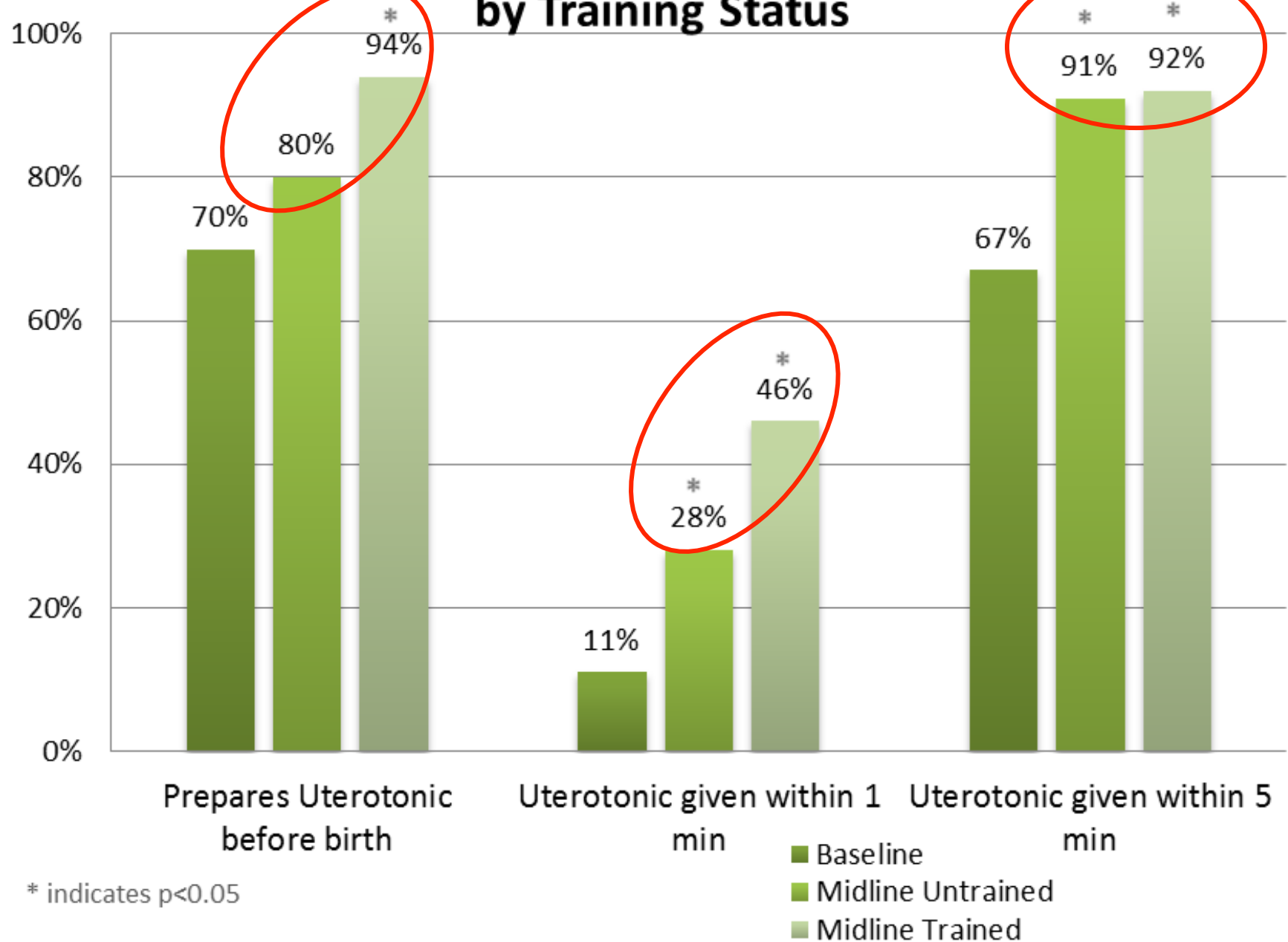
Indicator	Control			Clinical Mentor for practice		
	Baseline	Midline	p-value	Baseline	Midline	p-value
Provider washes hands with soap/water or uses alcohol rub	35%	47%	0.044	35%	58%	<0.001
Prepares Uterotonic drug for AMTSL	79%	79%	0.927	77%	93%	<0.001
Prepares self-inflating ventilation bag	31%	42%	0.073	36%	62%	<0.001
Uterotonic given within 1 min of birth	11%	24%	0.004	16%	34%	<0.001
Uterotonic given within 5 min of birth	59%	68%	0.113	77%	95%	<0.001
Visually assesses amount of bleeding within 1 min of delivery of placenta	50%	42%	0.176	60%	67%	0.05
Places baby on mother's abdomen "skin to skin"	34%	55%	<0.001	33%	61%	<0.001
Ventilates at a rate of 30 to 50 breaths/minute	50%	50%	1.000	42%	88%	<0.01
Provider encourages mother to initiate breastfeeding	13%	53%	<0.001	30%	70%	<0.001

*

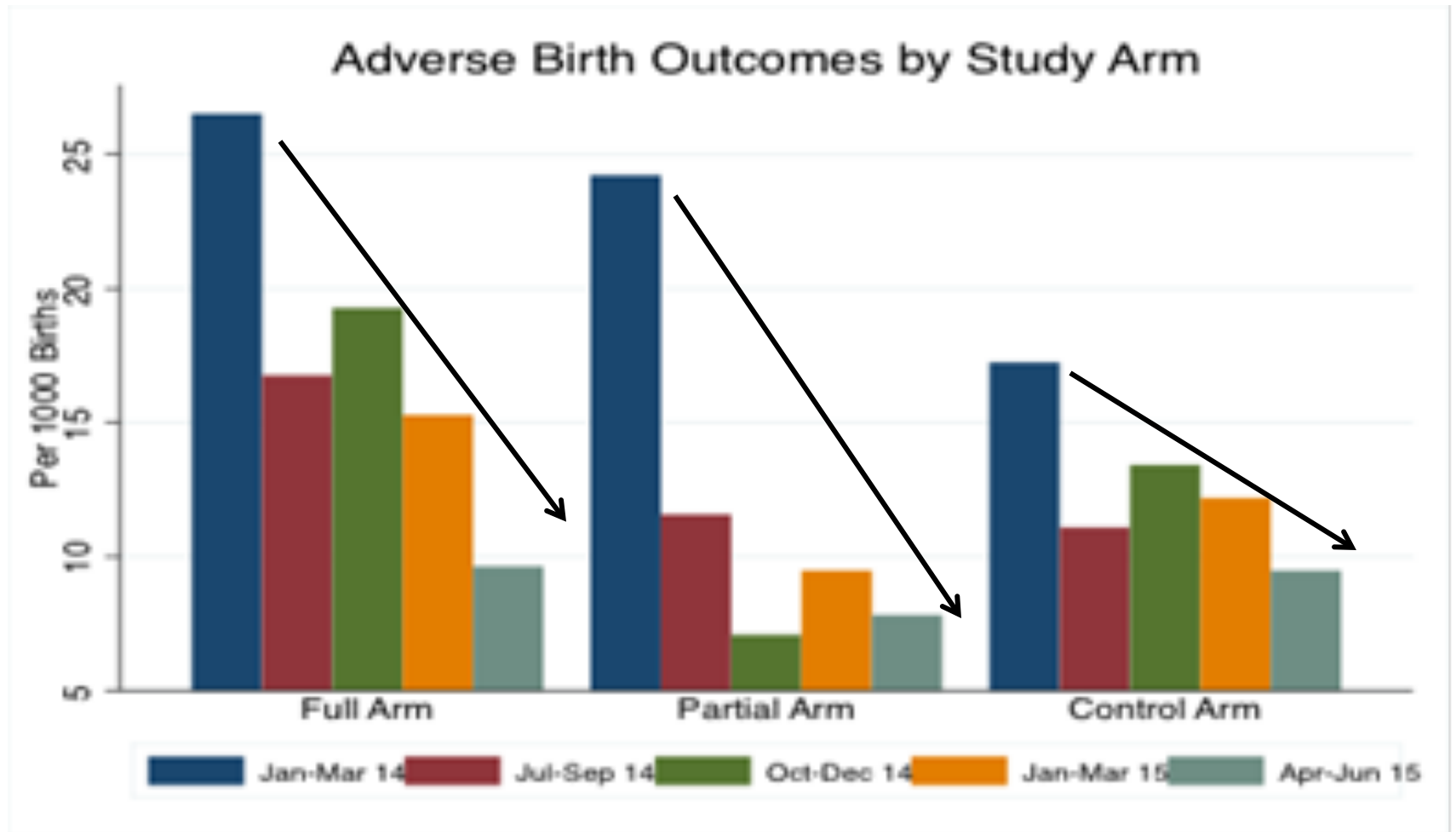
Changes in Routine Care by Training Status



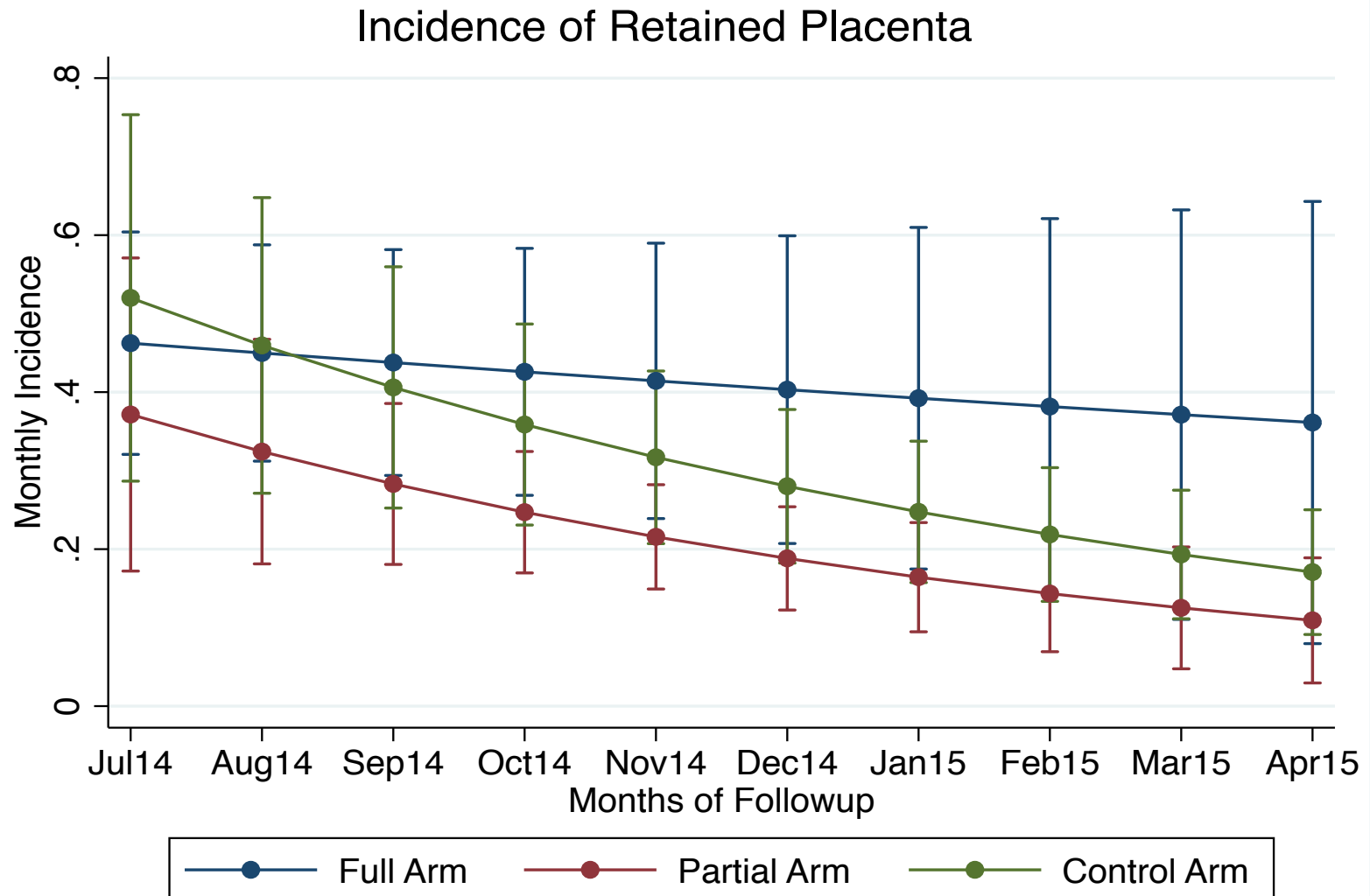
Uterotonic Preparation and Delivery at Midline, by Training Status



Results: HMIS – Fresh Stillbirth, Early Neonatal Death



Results: HMIS – Retained placenta



In Process

- Qualitative study
- Knowledge and skills testing
- Endline – in the field
- Maternal death



During the time we are gathered here for GMNHC, nearly 2400 women will die from pregnancy related causes as will many more newborns



The time to act is now.

