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Maternal and Child Health
Integrated Program

Evaluation of Mobile Phone- Based Mentoring to Support Post- Training Retention and Performance in Midwifery Tutors/Preceptors in Ghana



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Ghana



- Lower-middle income country
- 24+ million population
- Health indicators
 - Maternal mortality 350 / 100,000
 - Under-5 mortality 74 / 1,000
 - Infant mortality 45 / 1,000
 - Neonatal mortality 28 / 1,000
 - Modern Contraceptive prevalence rate 17%
- Focus on achieving MDG 4 & 5
- Priority on increasing number of midwives and supporting midwifery education

Background: Basic Emergency Obstetric and Newborn Care (BEmONC) Training

- BEmONC training
 - 24 Midwifery educators and preceptors
 - 6 Midwifery schools
- Focus on four life-saving technical areas:
 - Active Management of the Third Stage of Labor (AMTSL)
 - Newborn Resuscitation
 - Manual Removal of the Placenta
 - Pre-Eclampsia / Eclampsia
- Small technical team, geographic distance and limited project budget
- Alternative post-training follow up

Question: Could mobile phone-based mentoring provide sufficient support to educators and preceptors to retain knowledge, encourage confidence and increase performance after BEmONC training?

What is Mobile Phone-Based Mentoring (mMentoring)?



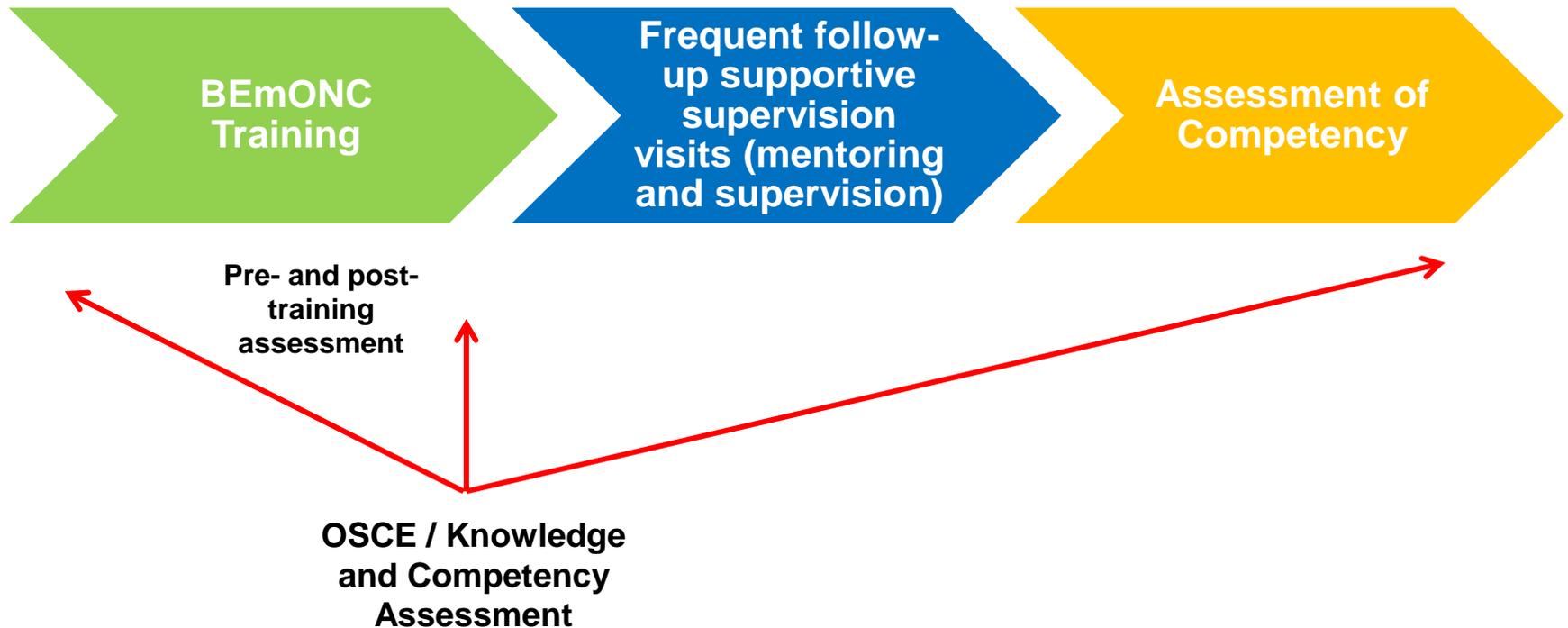
Mentor (trusted and experience guide) and a **Mentee** (learner)

Mentoring = technical support, follow-up, encouragement, answering questions, providing advice, problem-solving, addressing issues and challenges

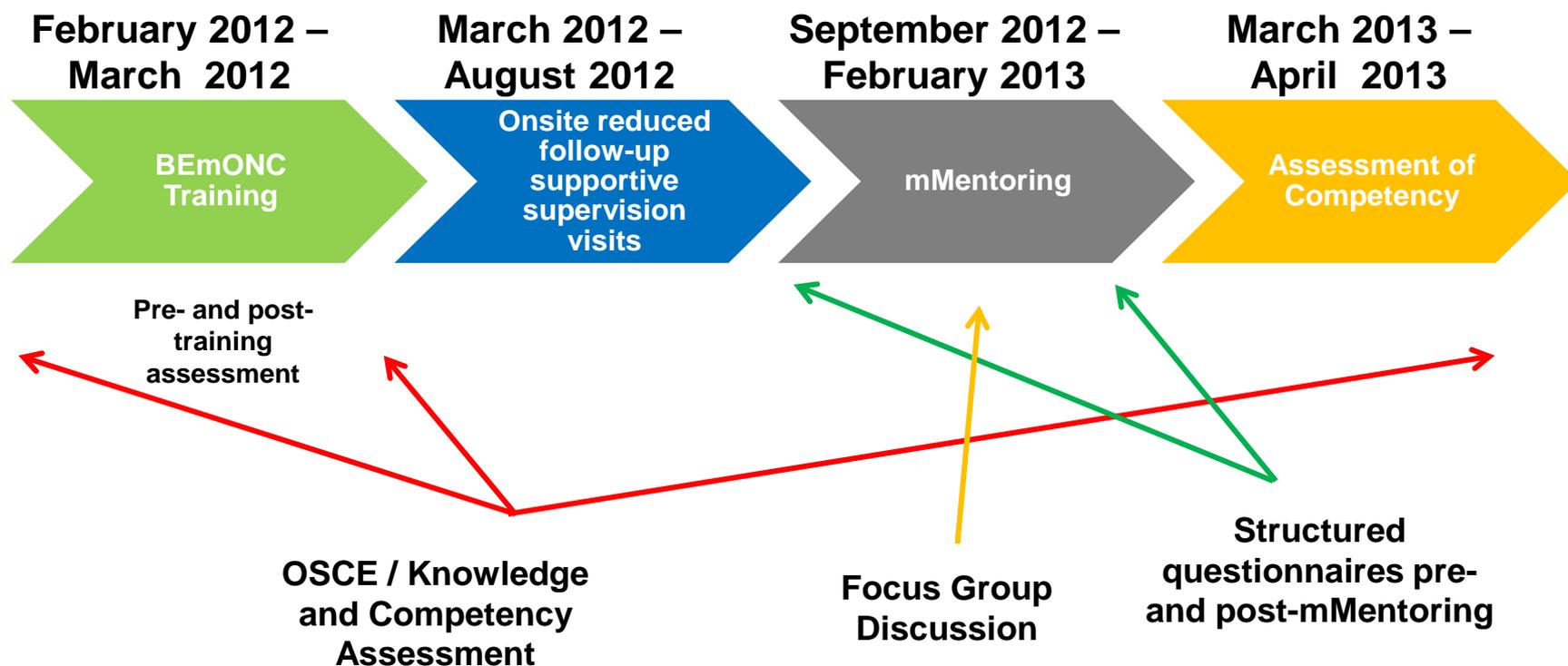
+ Retention of new skills and knowledge
Encourage confidence

= Increased performance

Traditional BEmONC Training



BEmONC Training with mMentoring



mMentoring Design



FRONTLINESMS

mMentoring



1. SMS

**SMS
Reinforcement**

**Interactive
Quizzes**

2. Voice

**Scheduled
Mentoring
Calls**

"Flash Me"

SMS Reinforcement Messages

To remove the placenta, place one hand on the abdomen to support the uterus and provide counter-traction. This also prevents inversion of uterus.

Most babies just need help with the first few breaths, so always have a bag & mask ready at EVERY birth. Failing to plan is planning to fail!

For women on MgSO₄, every 30 minutes check: respirations (over 16), reflexes (+) and urine output (30 ml/hr). Careful attention saves lives!



SMS Quizzes

MgSO₄ loading dose: a) 2g of 20% sol IV slowly & 10g of 50% sol IM, divided, b) 4g of 20% sol IV slowly & 10g of 50% sol IM, divided. Reply a or b



ANS: a

Response (Incorrect): No, the correct loading dose of MgSO₄ is 4 grams of a 20% solution IV slowly and 10 grams IM of 50% solution in divided doses.

ANS: b

Response (Correct): That's correct. The correct loading dose of MgSO₄ is 4 grams of a 20% solution IV slowly and 10 grams IM of a 50% solution in divided doses.

Mentoring Calls

Time	Call Format
2 – 5 min	Greet and establish rapport
2 - 3 min	Review the purpose and outline of the call
3 - 5 min	A: Reinforce Retention: <ul style="list-style-type: none"> Outline technical area to be covered (e.g. Newborn Resuscitation) Recap key knowledge and answer any questions
3 - 5 min	B: Encourage Confidence <ul style="list-style-type: none"> Personal reflection on competence and progress to date Explore challenges and plans to address them
5 - 10 min	C: Support performance <ul style="list-style-type: none"> Conduct verbal case scenarios Debrief and recap key points highlighted in case study Review action plan for addressing gaps and implementation of knowledge and practice
2 - 3 min	Wrap up and confirm next call

“Flash Me”



- Missed call to mentor
- Mentor calls back in 10 minutes
- Most common reasons for use of Flash Me:
 - Ask question
 - Real time clinical scenario
 - Review case study / teaching preparation

Schedule: 4 Weeks / Technical Area

Weeks	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday & Sunday
Week 1	SMS #1 (Reinforcement)	SMS #2 (Quiz)	SMS #3 (Reinforcement)	SMS #4 (Quiz)	SMS #5 (Reinforcement)	
Week 2	SMS #6 (Quiz)	SMS #7 (Reinforcement)	SMS #8 (Quiz)	SMS #9 (Reinforcement)	SMS #10 (Quiz)	
	Mentoring phone calls (#1)					
Week 3	SMS #1 (Reinforcement)	SMS #2 (Quiz)	SMS #3 (Reinforcement)	SMS #4 (Quiz)	SMS #5 (Reinforcement)	
Week 4	SMS #6 (Quiz)	SMS #7 (Reinforcement)	SMS #8 (Quiz)	SMS #9 (Reinforcement)	SMS #10 (Quiz)	
	Mentoring phone calls (#2)					

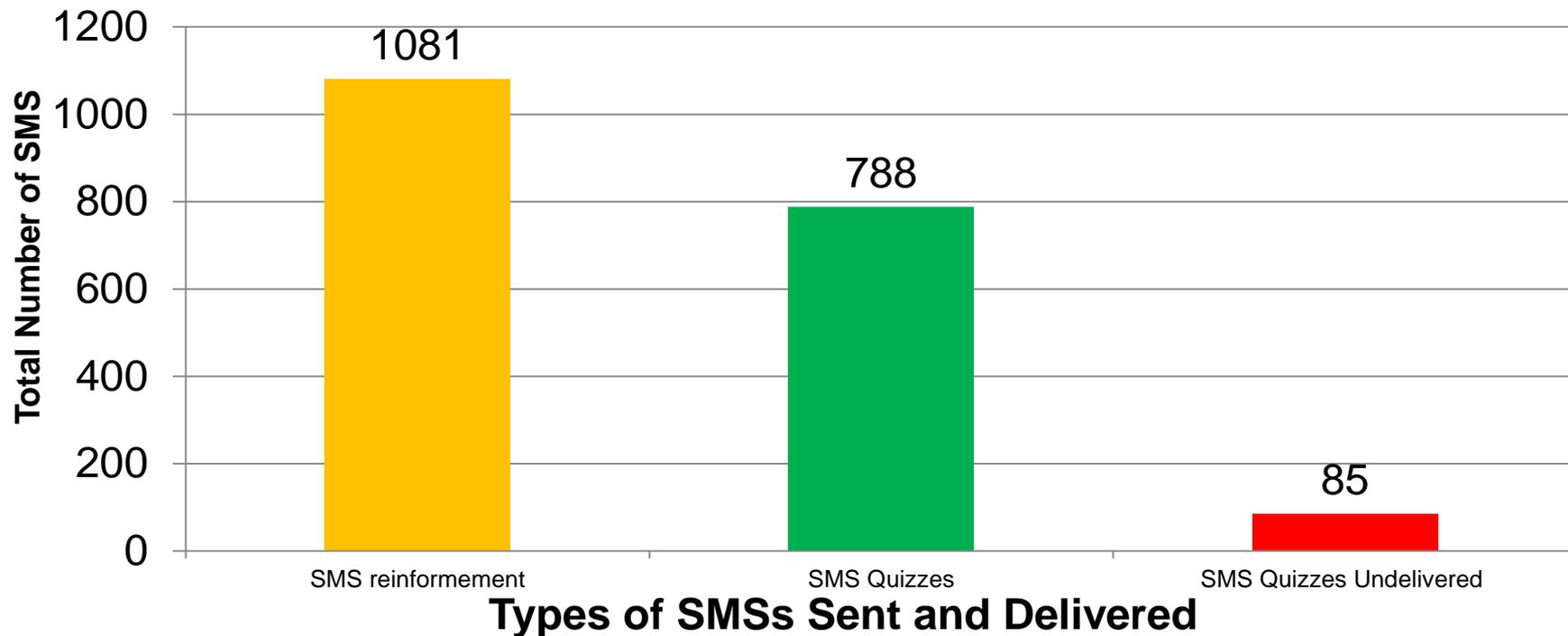
Research Methods

- Purposive sampling:
 - 21 training participants
 - Six midwifery schools
- Analysis:
 - Pre- and post-training and end of mMentoring program:
 - Objective structured clinical examination (OSCE)
 - Knowledge assessment
 - Voice call records
 - Frontline SMS data logs
 - Pre- and post-mMentoring intervention questionnaires
 - Focus group discussions (FGD)



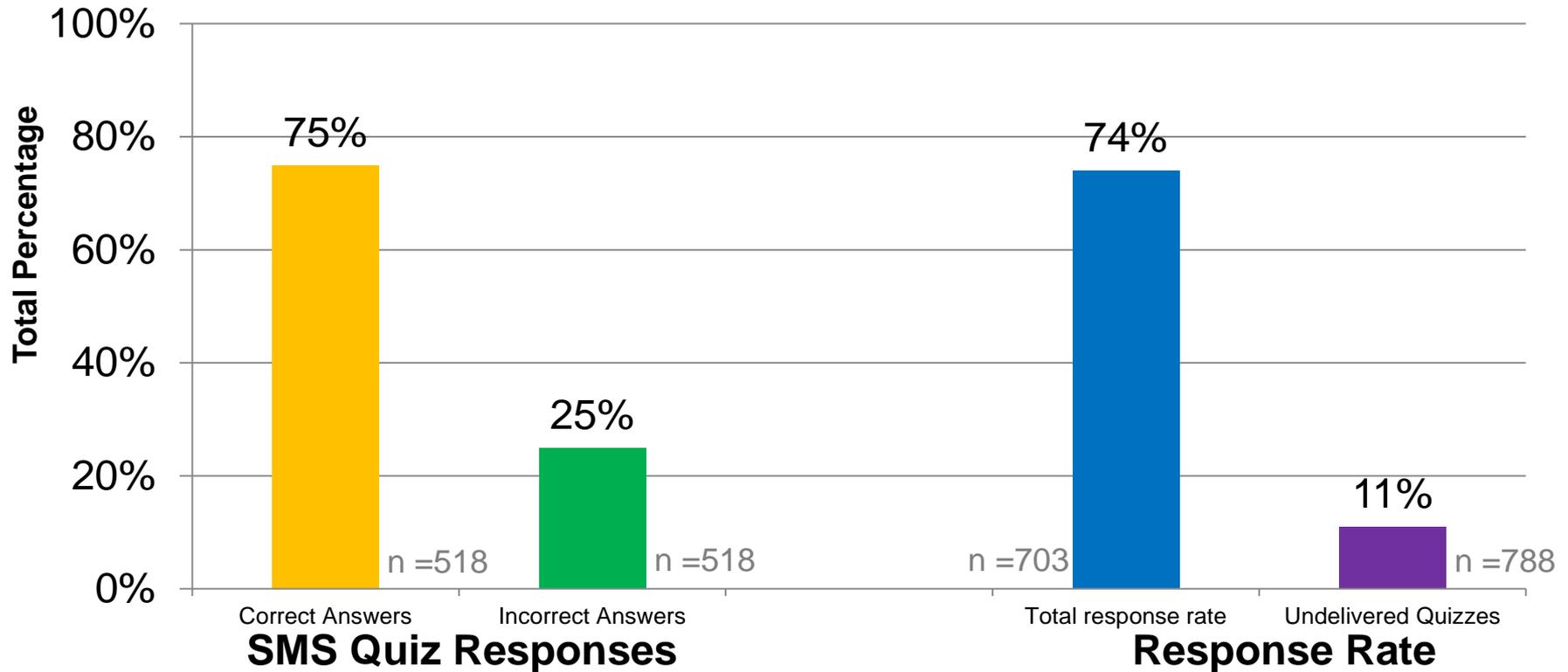
Results: Participation and Response

Summary of SMS Reinforcement and Quiz Messages Sent and Delivered (Preliminary Results)



Results: Participation and Response

Summary of Participant Response Rates (Preliminary Results)



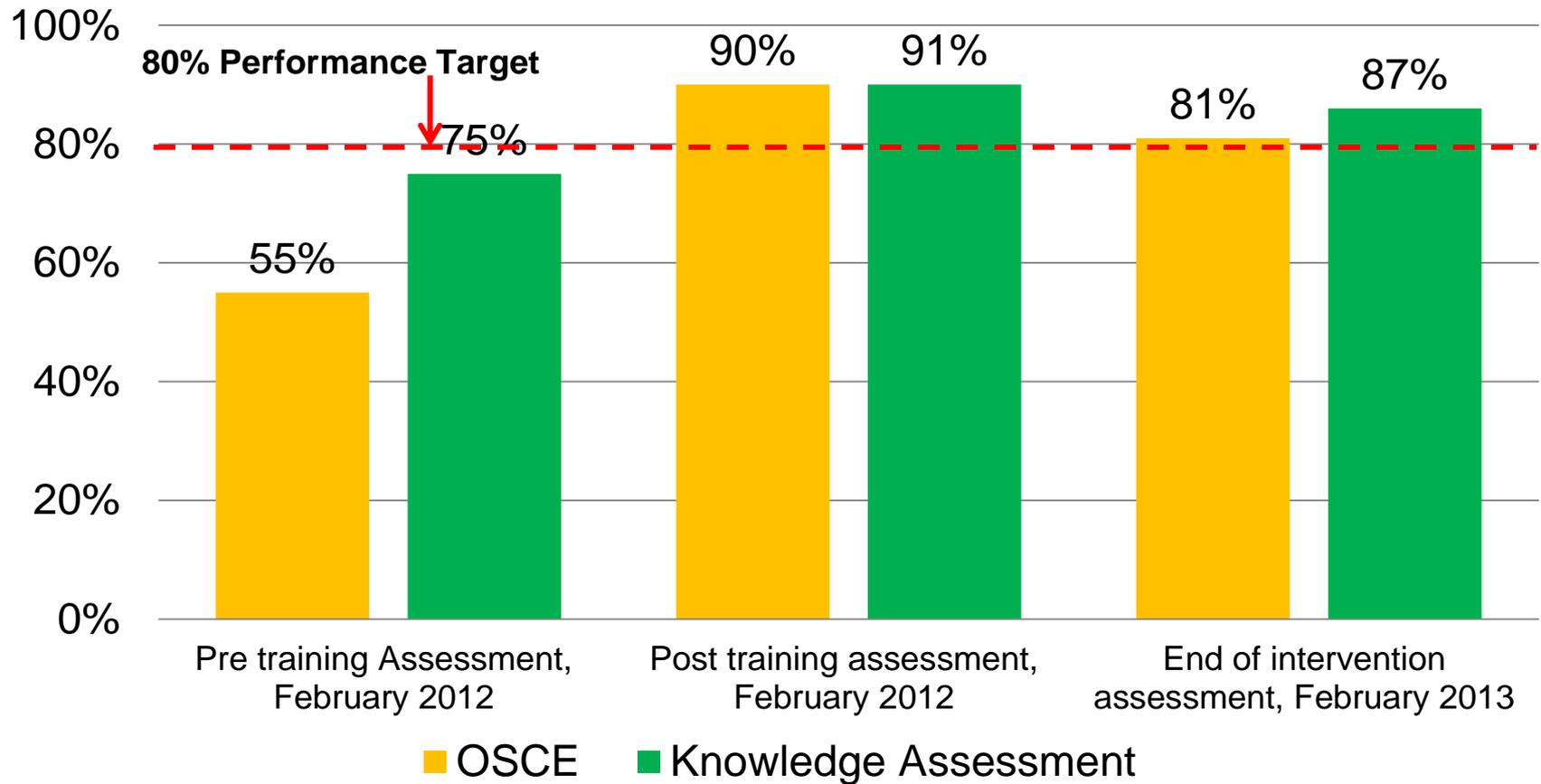
Results: Focus Group Discussion

...it helped a lot and I was so eager to get the questions right. No one wants to get wrong answers. Instructions were very clear. [I saved them] and now day and day out have something to keep and refer back to.

After having a discussion with your mentor, it is still fresh in your mind. Like someone is reminding you of what you are going to teach.

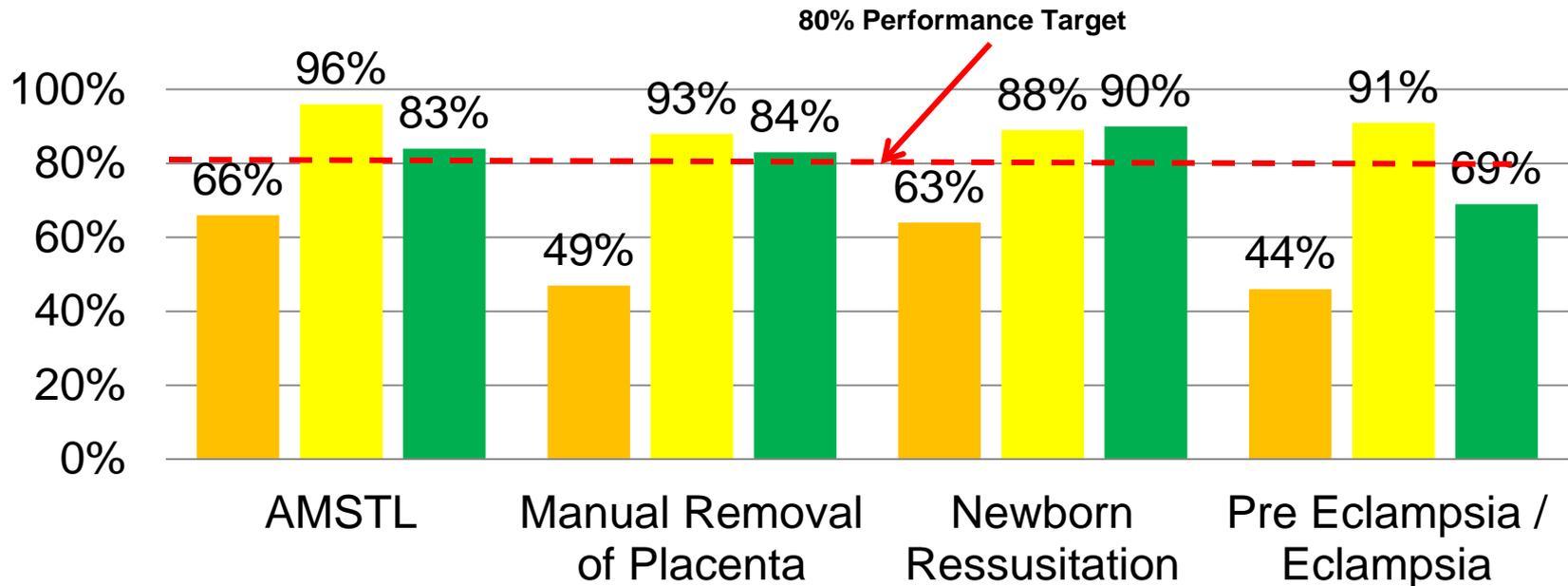
Yes, my confidence and practice has changed! ... When it comes to life-saving of mothers, mMentoring taught that me that bleeding can take a mother's life away very quickly. I implemented what I learned and I saved a mother's life during delivery...

Results: Maintenance of Knowledge and Competence (n=16)



Results: Performance by Technical Area (n=16)

- Pre training Assessment, February 2012
- Post training assessment, February 2012
- End of intervention assessment, February 2013



Implementation Challenges

1. FrontlineSMS

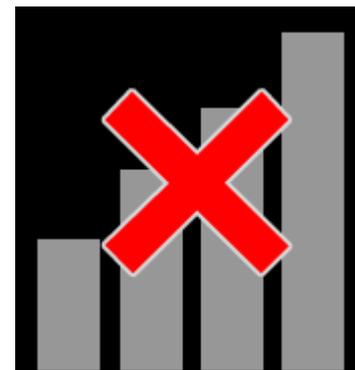
- Learn by doing
- Prescheduling of messages

2. Participants

- Quiz question response format
- Reduced number of participants

3. Service Provider & Coverage

- Unreliable cellphone service
- Out of coverage areas



Recommendations and Implications for Practice

- Inexpensive and easy to implement
- FrontlineSMS is small scale
- Low barriers to entry with high level of acceptance
- Demonstrated effectiveness
- Quality message content and quiz design is important
- Highly applicable for technical / clinical training
- **Next steps – scale up!**





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Thank You