



# Ms Emma Kwegyir-Afful Ghana

*Lifting and pregnancy outcomes:  
feasibility of a randomized controlled  
trial in Ghana*



# Lifting and pregnancy outcomes: feasibility of a randomized controlled trial in Ghana

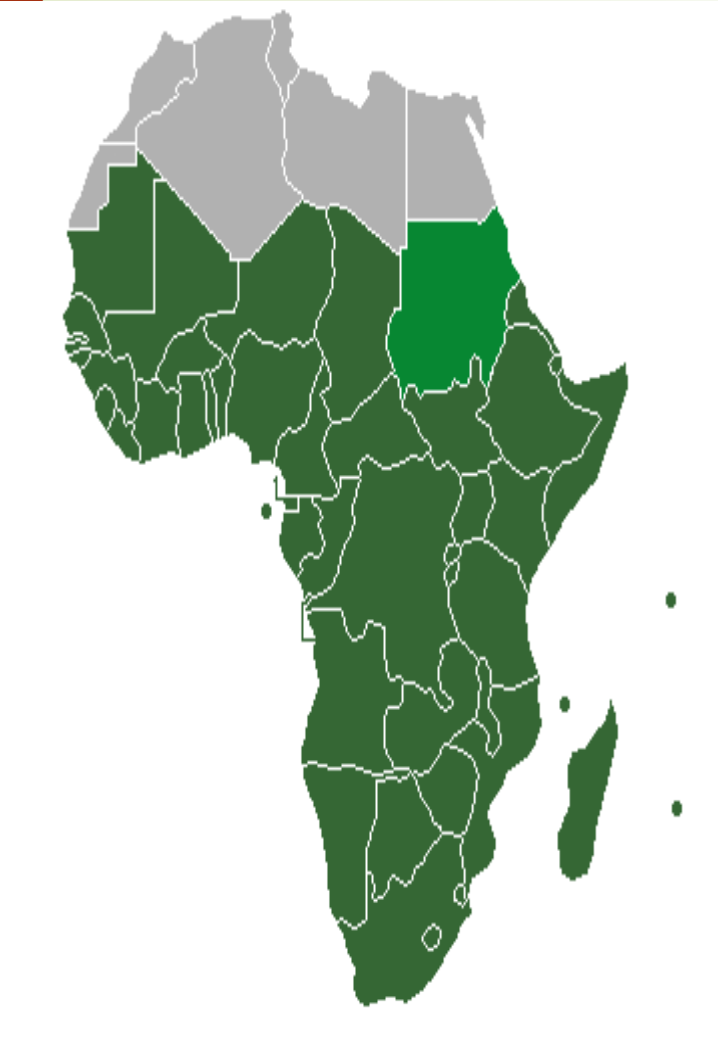
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2

# Background

3



Emma Kwegyir-Afful

60% of  
preterm birth

96% of low  
birthweight



# Causes



- In 40-50% of spontaneous preterm birth and low birthweight cases, the causes are unknown.

# Effects of maternal occupation on pregnancy outcome

- ❖ Some epidemiological studies suggest association between maternal physically demanding activities and adverse pregnancy outcomes.
- ❖ Maternal exposure to extreme physical exertion is a common phenomenon in low and lower-middle-income countries including sub-Saharan Africa and Southern Asia.
- ❖ Within these settings adverse pregnancy outcomes are more prevalent.

# Daily activities of some Ghanaian pregnant women



**34 weeks pregnant  
carrying 51kg load  
on the head**



**25 weeks pregnant woman being helped to carry 125 pieces of oranges (39kg)**





# The 3-component intervention

- ➔ We propose a multicomponent lift-less intervention



Shopping



**STOP**

- Lifting heavy loads that are more than 10kg, either at home or at work
- Lifting/lowering objects below the knee

**HOW**

- Divide objects into smaller portions before lifting
- Seek help from close relatives when there is the need to lift an object that is more than 10kg.

**SEEK**

- Immediately report to the clinic when you have severe contractions, vaginal bleeding or leaking of clear fluid from the vagina.

07/04/2018  
**REMINDER CARD**

# Aim of the study and hypothesis

- ❖ To examine how the intervention will reduce lifting behaviour among Ghanaian pregnant women.

## **Hypothesis**

- ❖ We hypothesize that the intervention can reduce maternal heavy lifting. Implementation during the last two trimesters of pregnancy will lead to a reduction of preterm birth and low birthweight.

# Methods and materials

- Six midwives received one day project specific training on how to recruit participants and administer the intervention.
- Twenty pregnant women were screened and 13 met inclusion criteria.
- A total of four intervention sessions were held at weekly intervals between August and September, 2016.
- During the first session, participants gave their written informed consent.

# Intervention sessions

- Each component of the intervention was administered at each session and boosters at the last session.
- Ten participants attended the first session but seven completed all the sessions.
- The seven midwives attended all the sessions.
- Participants received refreshment and transportation reimbursement at all sessions.

# Exposure Assessment

- ▶ Participants recorded their daily activities (lifting and carrying) on a pre-designed form for 14 days.
- ▶ For those who could not do the entries, a midwife or a support person entered the daily activities.

# Results

- In the first seven days, participants' self-reported average frequency of lifting 3.5 (SD 1.7) times and a total average weight of 41.1 kg (SD=13.3 kg) per lift.
- In the last seven days, the frequency of lifting reduced to 2.3 (SD=1.0) times and the weight to 13.4 kg (SD=10.9) per lift.
- Six midwives evaluated the intervention and suggested it to be implemented in all ante-natal clinics.

# Strengths and limitations

## Strengths

- Prospective data collection.
- Assessment of exposure for 14 days.
- The intervention reduced heavy lifting in real life situation.

## Limitations

- Small sample size.
- Potential recall bias.



# Conclusions

- ❖ Most pregnant women are exposed to extreme physical workload in Ghana.
- ❖ The lift-less intervention is feasible with some modifications

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