

## Introduction

This session was organized by Share-Net. In particular involved was the working group Linking Research, Policy and Practice, one of the working groups of Share-Net. The chair of this working group, Billie de Haas (PRC, University of Groningen), chaired the Share-Net session at the conference.



Health care services are not easily accessible for everyone. Stigma and lack of means are only some of the reasons that may prevent people from accessing health care services. This session focused on hard-to-reach groups, among which MSM, pregnant women and young men, and discussed how mHealth and other interventions targeting health workers may contribute to increased health care uptake.

**Presentation 1:** Antecedents of Teenage Pregnancies in Bolgatanga, Ghana (F.E.F. Mevissen et al.)

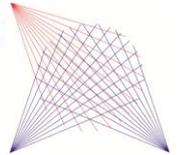
**Presentation 2:** Systematic review on the role of mHealth intervention to improve maternal and neonatal care in LMIC's (S. F. V. Sondaal & A. B. J. Borgstein et al.)

**Presentation 3:** Mobile for Mothers India: Identifying Risk and Changing Behavior during Pregnancy (L. Liem et al.)

**Presentation 4:** Exploring active engagement of young male having sex with male (MSM) in Bangladesh and young males in Kenya in improving their sexual and reproductive health through building on the GGD Amsterdam STI clinic experience (P.Baatsen et al.)

**Overall discussion:** The following questions were discussed:

- ❖ What can we learn from the intervention strategies discussed? Under which preconditions are they successful?
- ❖ How can health workers and clients be engaged in a meaningful way in setting-up and evaluating such interventions?



## Presentation 1: Antecedents of Teenage Pregnancies in Bolgatanga, Ghana (F.E.F. Mevissen et al. organisation)

**Background** Worldwide, levels of teenage pregnancies are still too high, with rates in Africa reaching 48%. The majority of these pregnancies are unplanned and unwanted. In addition, being pregnant or delivering a baby as a teenager bears serious health risks. In order to address these high levels of unplanned and unwanted pregnancies, it is important to know which factors influence a failure among teenage girls to protect themselves against pregnancies.

**Methods** Semi-structured in-depth interviews were conducted with teenage girls and boys with pregnancy experience (N = 21 girls & 3 boys) and without (N = 23 girls & 17 boys) in Bolgatanga, North Ghana. The interview protocol was guided by themes (relationships, sexuality and sex, pregnancy, family planning) and determinants (knowledge, attitudes, self-efficacy, norms, risk perceptions) derived from empirical research and theories related to sexuality behavior and pregnancy beliefs.



**Results:** Please find here the main results from the study. For the entire presentation, see the annex (no.1).

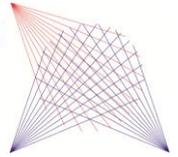
### Results (1): Girls *without* pregnancy experience

#### Behaviors

- High school attendance
- Mostly no sexual experience
- Consistent condom use
- No use of other contraception
- No communication about sex(uality)

#### Determinants

- Mixed or negative attitudes towards sex & boyfriends
  - Better wait until school is finished
- High risk perceptions
- Negative social norm towards teen pregnancy
- Strong life purpose
- Negotiation skills
  - No is No



## Results (2): Girls *with* pregnancy experience

### Behaviors

- Irregular and incorrect condom use
- No communication
- Sexual coercion

### Determinants

- Lack of knowledge on reproductive health
- Ambivalent attitudes towards contraception
- Lack of self-efficacy
- Boys responsible for protection

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## Results (3): Boys

### Behaviors

- Multiple sex partners
- Sex in exchange for 'money'
- No communication about sex(uality)

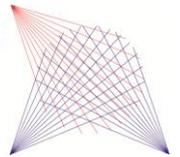
### Determinants

- Limited knowledge
- Flawed risk perception
  - Good vs. bad girls
- Shared responsibility
- Distrust in girls
  - Back up girlfriends

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**Conclusions:** Condom use was the main form of sexual protection. Other forms of contraception were often linked to infertility. There seems to be no communication about sexual-related matters at all among sexual partners, friends, or family. A big knowledge gap on sexuality issues was observed among boys and girls. Attitudes towards relationships, sex, and sexual protection as well as risk perceptions varied depending on sexual – and pregnancy – experience as well as gender.

**Discussion** Interventions should focus on knowledge, attitudes, trust, self-efficacy, risk perceptions and normative beliefs regarding sexuality in general, and sexuality-related communication and actual contraception use specifically. Future research should target the role of parents and the community.



## Presentation 2: Systematic review on the role of mHealth intervention to improve maternal and neonatal care in LMIC's (S. F. V. Sondaal & A. B. J. Borgstein et al. organisation)

**Background** Despite worldwide progress low- and middle-income countries (LMICs) face the highest burden of maternal and neonatal deaths combined with the lowest number of physicians. As such, continuous investments are needed in (human) resources and infrastructure, and innovative novel approaches such as mobile health (mHealth) are required.

**Research question** “To assess the potential of **mHealth interventions** focused on supporting (1) **pregnant women** during the antenatal, delivery and postnatal period and (2) **health care providers** bestowing maternal and neonatal care in **LMICs** in improving **maternal and neonatal outcomes**”



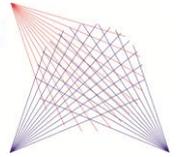
### Key messages – mHealth interventions targeted at pregnant women<sup>1</sup>

- Access to and experience of care improved
  - ANC visits (Lund et al., 2014, Kaewkungwal et al., 2010)
  - Skilled attendance at birth (Lund et al., 2012)
  - Immunization services received (Kaewkungwal et al., 2010)
  - Facility utilization rate (Oyeyemi and Wynn, 2014)
  - Depressive symptoms amongst HIV+ pregnant women (Ross et al., 2013)
  - Confidence scores and anxiety levels (Jareethum et al., 2008)
- Pregnancy related outcomes
  - Perinatal mortality (OR, 0.50; 95% CI, 0,27–0,90) (Lund et al., 2014)
  - Compliance to iron supplementation (Khorshid et al., 2014)

### Key messages – mHealth interventions targeted at health care providers

- Data collection tool:
  - Positive effect on reporting postpartum haemorrhage and recorded birth weights (Andretta et al., 2011; Gisore et al., 2012)
- Communication tool:
  - Reduced communication gap between CHWs and higher health institutions (Lemay et al., 2012; Ngabo et al., 2012)

<sup>1</sup> From presentation. For the entire presentation see annex 2.



- Education:
  - Positive outcome (Woods et al., 2012)

**Conclusions** mHealth interventions can be effective solutions to

- Improve access to and experience of maternal and neonatal care for pregnant women
- Improve data collection by, communication between, and education of health care providers

Future recommendation is the continuation of strong experimental research design, combined with qualitative research, to better assess the impact of mHealth interventions to improve maternal and neonatal outcomes.

### Presentation 3: Mobile for Mothers India: Identifying Risk and Changing Behavior during Pregnancy (L. Liem et al. organisation)

**Background** An application Mobile for Mothers (MfM) was introduced to health workers to use during home visits to pregnant mothers. The application combines images, text and voice messages to offer health workers opportunities to pose questions and seek information and advice . Essential health data are stored in an online database.



**Results so far<sup>2</sup>:**

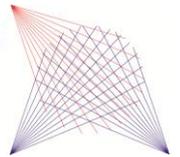
- Registration for ANC improved from 67% to 89%
- Birth preparedness plan from 21% to 84%
- Planned delivery with skilled birth attendant from 45% to 85%

**Challenges:**

- Adaptation to government requirements took much time, errors in application occurred
- Training in typing skills ( alphabets on mobile) took time, due to semi-literacy of Community Health Workers and



<sup>2</sup> From presentation. For the entire presentation see annex 3.



unknown alphabet

- Data base not user-friendly; data has to be analysed manually, e.g. if ANC visit is missed, an alert will be sent

Link to short video that was shown:

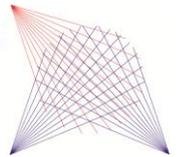
<https://www.youtube.com/watch?v=QBDFBIWVN8Y>

Presentation 4: Exploring active engagement of young male having sex with male (MSM) in Bangladesh and young males in Kenya in improving their sexual and reproductive health through building on the GGD Amsterdam STI clinic experience (P.Baatsen et al. organisation)

**Background** In many low-and-middle-income countries, young men are neglected by Sexual Reproductive Health and Rights (SRHR) programs and -related research and as result have inadequate and limited access to health services. Among the many reasons for this are: the (negative) attitude of Health Care Providers (HCP) towards young men, the lack of understanding of HCP of the specific needs and roles of young men in SRHR and what approaches work best to improve their SRHR.



**Objective** Our intervention explores whether we can actively engage young men in Bangladesh and Kenya in improving their SRHR in a more effective way by strengthening 1) their motivation for change; and 2) the skills of HCP and peer educators on how to engage young men in a more client-centered way. This strengthening is done by the GGD Amsterdam STI clinic which - when training our local partners in Bangladesh (Bandu) and Kenya (AMREF) - builds on its own experience with motivational interviewing. This Motivational Interviewing is enhanced with an innovative and community-led component (our so called motivational intervention, MI+ approach).



### Results: Bangladesh<sup>3</sup>

- Scope is doable; one MSM organisation and homogenous target group but challenges reaching 15 – 18 yrs olds
- Young MSM are facing many challenges related to sexual feelings, masturbation, dating and STIs
- MSM confronted with stigma and MI+ seen as an useful approach to address this
- Lot of interest in the approach – desire to move away from doing business as usual

### Results: Kenya

- Young males not part of the development discourse
- Poverty, access to education, sexual life, and growing up give many challenges, including sexual violence
- Access to health services is a problem. Delay in a context of STI and HIV problematic
- Judgmental attitudes of providers

### Conclusions:

Trajectory indicates

- attitude change of different professional groups; MI enables them to do their work better
- More young men coming to facility but this needs strengthening in time to make it long lasting
- Not easy to measure behavioural change and access of young males and MSM in the present design
- Unexpected spin offs need to be documented

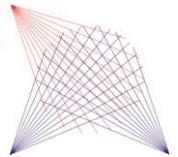
## Discussion

Issues mentioned:

- ❖ mHealth: not every intervention is suitable for every group or region. For example, it is important to have a good infrastructure (internet / mobile phones). In order to be successful with mHealth the target group needs to have money for airtime and electricity to charge the mobile phone.
- ❖ mHealth: target both health workers and target group (pregnant women) because mHealth interventions serve different purposes for these groups.

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<sup>3</sup> From presentation. For entire presentation, see annex 4.



- ❖ Motivational interviewing: sometimes this methodology has its challenges, e.g. in a culture where a health worker is used to giving advice and a client is used to receiving this.

## Annex: Abstracts

### The role of mHealth interventions in improving maternal and neonatal care in low and middle income countries: a systematic review

S. F. V. Sondaal<sup>1</sup> & A. B. J. Borgstein<sup>1</sup>, J. L. Browne<sup>1</sup>, M. Amoakoh-Coleman<sup>1,2</sup>, and K. Klipstein-Grobusch<sup>1,3</sup>

<sup>1</sup> Julius Global Health, Julius Center for Health Sciences and Primary Care, University Medical Centre Utrecht, Utrecht, The Netherlands.

<sup>2</sup> University of Ghana, School of Public Health, Accra, Ghana.

<sup>3</sup> Division of Epidemiology and Biostatistics, School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa.

**Background** Despite worldwide progress low- and middle-income countries (LMICs) face the highest burden of maternal and neonatal deaths combined with the lowest number of physicians. As such, continuous investments are needed in (human) resources and infrastructure, and innovative novel approaches such as mobile health (mHealth) are required.

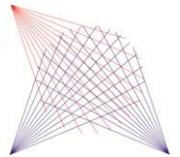
**Objective** A systematic review assessing the potential of mHealth interventions for maternal and neonatal care in LMICs.

**Methods** The Cochrane Library, PubMed/MEDLINE, EMBASE, Global Health Library and Popline were searched systematically until August 2014. Quality assessment occurred using an adapted Cochrane Risk of Bias Tool and the Newcastle-Ottawa Quality Assessment Scale. Data synthesis aimed to give a narrative analysis.

**Results** 12 interventions and 11 observational studies with the target population of pregnant women were included. The main mHealth functions were education, monitoring, reminding, supporting and responding in emergencies. Effects are mainly observed in access to and experience of care, and limited for health outcomes.

11 interventions and 6 feasibility studies targeting health care workers were included. The main mHealth functions were communication, data collection, or educational tools for community health providers, and showed to be effective.

Barriers to successful mHealth interventions include illiteracy, equity, costs for participants, technological issues, and maintenance of mobile phones. Comparability across studies and interventions was difficult due to varying



outcomes and quality. Analysis of observational studies highlighted the importance of mixed methods within experimental mHealth intervention studies.

**Conclusions** mHealth interventions can be effective solutions in improving the access to and experience of care. Future recommendation is the continuation of strong experimental research design, combined with qualitative research, to better assess the impact of mHealth interventions to improve maternal and neonatal outcomes.

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### Mobile for Mothers India: Identifying Risk and Changing Behavior during Pregnancy

L. Liem<sup>1</sup> and M. Choudhury<sup>2</sup>

<sup>1</sup>Simavi, Haarlem, the Netherlands, <sup>2</sup>NEEDS, Jharkhand, India

**Background** An application Mobile for Mothers (MfM) was introduced to health workers to use during home visits to pregnant mothers. The application combines images, text and voice messages to offer health workers opportunities to pose questions and seek information and advice. Essential health data are stored in an online database.

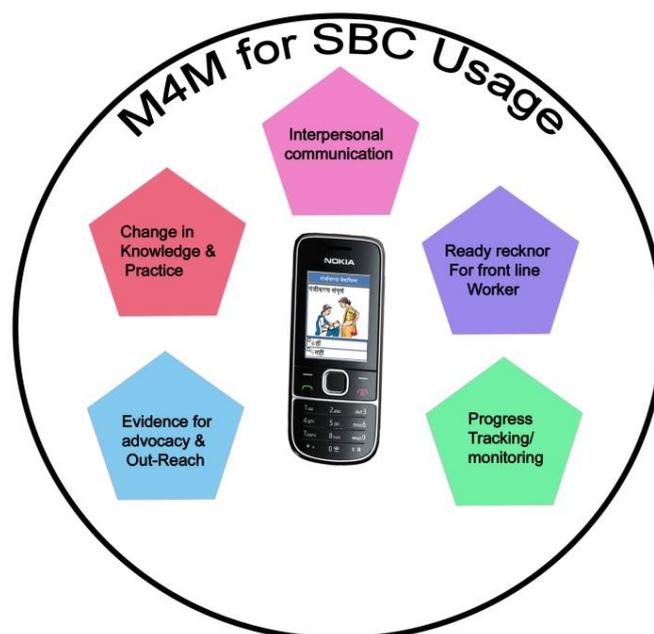
#### Objectives

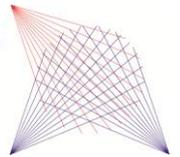
(1) Reducing maternal and new born deaths by increasing knowledge and healthy practices

(2) The database supports health service providers to identify problems and plan timely action.

**Methods** In phase I, Focus Group Discussions and In-depth interviews with the mothers and providers were held. In phase II: a quasi experimental study with two control areas was conducted.

**Results** Phase I: MfM increased the health workers' knowledge and confidence resulting in more effective advice given, and followed by clients. More problems were identified like RTI/STIs, which were referred and





treated. Phase II: Preliminary results showed substantial increase in: ANC registration; birth preparedness, use of exclusive breast feeding, awareness on RTI/STI and deliveries in institutions.

**Conclusions** Phase I demonstrates the high level of acceptability of the technology for providers and clients. The application proved to have several advantages: providing essential information in a structured way, storing patient information and providing a real time data base on essential health indicators. The multi-media component supported utilization by semi-literate health workers and strengthened expecting mothers knowledge. Phase II includes a quasi-experimental study to prove the attribution of the application on improving safe motherhood. So far, the results in phase II are positive but in 2015 full results will be available.

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**Exploring active engagement of young Male having Sex with Male (MSM) in Bangladesh and young males in Kenya in improving their sexual and reproductive health through building on the GGD Amsterdam STI clinic experience**

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*Asst Professor, Dhaka University, Dhaka, Bangladesh*

*Consultant, Nairobi, Kenya*

*Coordinator research projects & researcher, GGD, Amsterdam, the Netherlands*

*Nurse and MI mentor and coach, GGD, Amsterdam, the Netherlands*

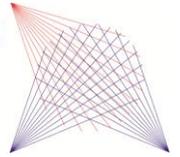
*Nurse and MI mentor and coach, GGD, Amsterdam, the Netherlands*

*Advisor SRHR, KIT, Amsterdam, the Netherlands*

*Senior Advisor SRHR, KIT, Amsterdam, the Netherlands*

**Background** In many low-and-middle-income countries, young men are neglected by Sexual Reproductive Health and Rights (SRHR) programs and – related research and as result have inadequate and limited access to health services. Among the many reasons for this are: the (negative) attitude of Health Care Providers (HCP) towards young men, the lack of understanding of HCP of the specific needs and roles of young men in SRHR and what approaches work best to improve their SRHR .

**Objective** Our intervention explores whether we can actively engage young men in Bangladesh and Kenya in improving their SRHR in a more effective way by strengthening 1) their motivation for change; and 2) the skills of HCP



and peer educators on how to engage young men in a more client-centered way. This strengthening is done by the GGD Amsterdam STI clinic which – when training our local partners in Bangladesh (Bandu) and Kenya (AMREF) – builds on its own experience with motivational interviewing. This Motivational Interviewing is enhanced with an innovative and community-led component (our so called motivational intervention, MI+ approach).

**Methods** KIT, together with National Researchers, conducts quasi-experimental mixed methods research in intervention and control sites in both countries, with in-between qualitative trajectories to study the effectiveness of this innovative intervention.

**Results & conclusions** The end-line results will come out early 2015. However, before study results confirm the high unmet SRHR needs of young men, while the qualitative trajectory indicate promising results especially in relation to attitude change of HCP, and uptake of services.

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#### **Antecedents of Teenage Pregnancies in Bolgatanga, Ghana**

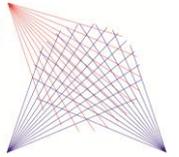
Mevisse, F.E.F., Krugu, J.K., Flore, K., MÜNkel, M., Prinsen, A., Ruiters, R.A.C.

*Maastricht University, Youth Harvest Foundation Ghana*

**Background** Worldwide, levels of teenage pregnancies are still too high, with rates in Africa reaching 48%. The majority of these pregnancies are unplanned and unwanted. In addition, being pregnant or delivering a baby as a teenager bears serious health risks. In order to address these high levels of unplanned and unwanted pregnancies, it is important to know which factors influence a failure among teenage girls to protect themselves against pregnancies.

**Methods** Semi-structured in-depth interviews were conducted with teenage girls and boys with pregnancy experience (N = 21 girls & 3 boys) and without (N = 23 girls & 17 boys) in Bolgatanga, North Ghana. The interview protocol was guided by themes (relationships, sexuality and sex, pregnancy, family planning) and determinants (knowledge, attitudes, self-efficacy, norms, risk perceptions) derived from empirical research and theories related to sexuality behavior and pregnancy beliefs.

**Results** Condom use was the main form of sexual protection. Other forms of contraception were often linked to infertility. There seems to be no communication about sexual-related matters at all among sexual partners, friends, or family. A big knowledge gap on sexuality issues was observed among boys and girls. Attitudes towards relationships, sex, and sexual



protection as well as risk perceptions varied depending on sexual - and pregnancy - experience as well as gender.

**Discussion** Interventions should focus on knowledge, attitudes, trust, self-efficacy, risk perceptions and normative beliefs regarding sexuality in general, and sexuality-related communication and actual contraception use specifically. Future research should target the role of parents and the community.

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