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Partnering to Save Lives



Evaluation Report Behaviour Change Communication Activities in the Northeast of Cambodia



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June 20th 2016

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Abbreviations

ANC	Antenatal Care
BCC	Behaviour Change Communication
CBD	Community Based Distributors
DFAT	Australian Department of Foreign Affairs and Trade
HC	Health Centre
IP	Indigenous Populations
IVR	Interactive Voice Response System
LDG	Learning and Dialogue Group
PHD	Provincial Health Department
PNC	Postnatal Care
PSA	Public Service Announcements
PSL	Partnering to Save Lives
RMNH	Reproductive, Maternal and Newborn Health
TBA	Traditional Birth Attendant
VA	Village Agent (Facilitator for VSLAs)
VSLA	Village Savings and Loans Association
VHSG	Village Health Support Group (community health worker)

Executive Summary

Background

In the four north-eastern provinces of Cambodia (Kratie, Mondul Kiri, Ratanak Kiri and Stung Treng), challenges of poverty, ethnicity, language and geography result in some of the worst reproductive, maternal and newborn health (RMNH) indicators in the country. In 2014, Partnering to Save Lives (PSL), entered into a partnership with MEDIA One, a Cambodian NGO, to implement behaviour change communication (BCC) interventions in all four provinces to improve RMNH knowledge, attitudes and practices. Interventions targeted pregnant women, postpartum women, men and women of reproductive age more generally. This evaluation aims to;

1. assess the effectiveness of different communication methods used within the package with different target audiences.
2. seek evidence of changes in knowledge, attitudes and practices as a result of the BCC interventions.

The interventions combined traditional and new communication channels, including;

- Village Health Promotion Events designed to create dialogue in communities about safe and healthy RMNH practices and to promote the other BCC interventions.
- Live radio broadcasts in the form of acted dramas and call in shows with RMNH experts. Also included were short public service announcements (PSA's).
- Listening and dialogue groups (LDG) consisted of community members gathered together by a local facilitator to listen and discuss the live radio broadcasts produced and aired by MEDIA One.
- SMS/voice messaging to community members with key RMNH messages (in Kratie and Stung Treng only)
- Interactive Voice Response (IVR) system (Kratie and Stung Treng only), a mobile phone system allowing listeners to hear information about maternity care, including components of pre-recorded radio program and other contents such as quiz or question.

In Mondul Kiri and Ratanak Kiri provinces, interventions were delivered in three ethnic minority languages used by Indigenous populations; Tampuan, Phnong and Jaray. In Kratie and Stung Treng interventions were delivered in Khmer.

Methodology and Research participants

The evaluation was qualitative and included a mix of interviews and participatory workshops. A total of 24 semi-structured interviews (six in each province) were completed in Kratie, Stung Treng, Mondul Kiri and Ratanak Kiri provinces. Interview topics included opinions of the different communication methods used, questions to assess RMNH knowledge and exploration of any behavioural change as a result of the intervention. In addition, one participatory workshop took place with RMNH service providers in each of the four provinces. These included health centre staff, volunteer community health workers known as Village Health Support Group members (VHSG) and Non-government organisation (NGO) staff including field agents involved in RMNH activities. An additional participatory workshop was completed with staff from MEDIA One in order to gain their view of the project successes and challenges.

Summary of key findings and recommendations from the evaluation

Objective 1: assess the effectiveness of different communication methods used within the package with different target audiences.

The following table is a summary of the communication methods used and their effectiveness with different target audiences. It also includes additional comments and suggestions for future interventions.

Communication method	Women	Men	IP's	Other comments
LDG's	<ul style="list-style-type: none"> • Excellent way to communicate with women of reproductive age. • Women showed evidence of being empowered by new knowledge and were keen to share with others. • Strong evidence for behaviour changes. • Community champions organically evolved from the LDG's and a more formal model using a positive deviance approach to mobilise them would increase sustainability and reach. 	<ul style="list-style-type: none"> • Men's groups in Mondul Kiri and Ratanak Kiri were effective in educating men, resulting in behaviour changes with their wife and newborn. • Men's awareness of RMNH directly impacted the practices of the family. • Kratie and Stung Treng should also have men's groups. In Stung Treng VHSg's and midwives feel men have power over women and would be more supportive if they understood healthy RMNH practices. 	<ul style="list-style-type: none"> • Excellent way to communicate as VHSg's spoke the local language and knew the culture. Also VHSg's followed up with home visits, reinforcing messages from the group. • Strong evidence for behaviour change. Good face to face communication for young pregnant women from IP's that are embarrassed to face health experts and relied on traditional methods of pregnancy care and delivery. 	<ul style="list-style-type: none"> • An excellent communication method for all provinces that reached a number of people, allowed for discussion and increased dialogue in communities of RMNH. • Strong evidence that increased knowledge from the LDG's translated into behaviour change in most areas with the exception of Postnatal care (PNC) and being able to follow dietary advice (due to high cost and low availability). Future interventions need to focus on these areas.
Radio broadcasts played during LDG's	<ul style="list-style-type: none"> • Good way for women and men who had no radio access to listen to radio broadcasts and learn about RMNH. • Radio dramas increased interest as participants wanted to follow the story from week to week. 		<ul style="list-style-type: none"> • IP's benefited from hearing a broadcast in their local language. • Khmer groups that lived amongst IP's found it difficult to follow IP broadcasts. • Future radio broadcasts in IP communities should also deliver in Khmer. 	<ul style="list-style-type: none"> • VHSg's learned from the radio broadcast, relieving pressure to remember all RMNH messages. • VHSg's improved knowledge will increase sustainability after the intervention ends as they will continue as community health workers.
Radio Broadcasts independent of LDG's and PSA's	<ul style="list-style-type: none"> • Not effective in Kratie and Stung Treng as participants had little or no access to radios. 		<ul style="list-style-type: none"> • IP's listened to the radio, however the channel, time and language did not 	<ul style="list-style-type: none"> • Elder generations listened to the radio more and were likely to have a

			always match the audience and should be better researched ahead of radio broadcast planning.	strong influence on the behaviours of younger relatives. • Radio shows targeting this generation should be considered.
SMS/Voice messages and IVR	<ul style="list-style-type: none"> • Women were unlikely to own phones and so this method was not effective in reaching women. 	<ul style="list-style-type: none"> • Men owned phones and some received messages but as they were targeted at women, were dismissed by men. • Specific male targeting through phones should be a future consideration. 	<ul style="list-style-type: none"> • IP's were not targeted using SMS/voice messages, however data indicated that the Tompoun population owned less phones in comparison to others. 	<ul style="list-style-type: none"> • Reading and writing ability restricted text message understanding and some voice messages were switched off before listening to the whole message. • Further testing of messages prior to wider roll-out was required.
Village health promotion events	The events were enjoyed and served to increase interest in RMNH messages. They raised awareness of radio broadcasts and LDG's. They also created discussion amongst communities, thereby setting the context for the other interventions.			

Objective 2: Seek evidence of changes in knowledge, attitudes and practices as a result of the BCC intervention

The most significant changes in knowledge, attitude and practice as a result of the interventions were women attending at health centres for antenatal care (ANC) and to deliver their newborn. This means that women were making contact with health professionals and were aware of the necessity to do so. This also had a wider impact on the other messages that were being communicated as part of the campaign. Once the women are at the health centre they received advice and guidance which further backed up the messages they may have heard via the LDGs, radio broadcasts and SMS/voice messages. Many of the participants identified the health centre as a main source of information and could remember what they had been told.

Taking iron supplements due to knowledge gained from LDG's and radio broadcasts was evident. In addition, awareness levels of contraceptives were high with nearly all participants being able to list contraceptive methods. However, misconceptions and fears of contraceptive use and side effects discussed mainly by male interviewees could result in decreased usage. Participants had previously used traditional methods of healing the newborns cord by placing beetles nests on the area, but following advice from the BCC interventions participants stopped this and only used treatments supplied by the midwife. Participants also stated that they now understood the necessity of giving the newborn the first breastmilk following the birth, something previously avoided in this area of Cambodia due to misconceptions.

Regarding the least significant change, postnatal care (PNC) and an unhealthy diet were the main two. An unhealthy diet was not due to a lack of knowledge but due to a lack of; understanding of food groups, money to buy foods and availability of specific foods. PNC was not understood by participants or practiced and should be a focus for future interventions.

In summary LDG's were an excellent way to communicate RMNH messages. Radio broadcasts worked well with IP's but not in Kratie and Stung Treng where radio access was minimal. Phone based interventions are unlikely to reach women and should be targeted for men. Key stakeholders such as Midwives and elder generations should be better integrated in BCC activities.

1. Background and introduction

In the four north-eastern provinces of Cambodia (Kratie, Mondul Kiri, Ratanak Kiri and Stung Treng), challenges of poverty, ethnicity, language and geography combine to restrict access to essential health care. As a result, the region has some of the worst reproductive, maternal and newborn health (RMNH) indicators in the country.

In March 2014, Partnering to Save Lives (PSL), a five-year program aiming to improve RMNH among vulnerable groups in Cambodia, entered into a partnership with MEDIA One, a Cambodian NGO, to implement a behaviour change communication (BCC) intervention in Kratie and Stung Treng. Financial support was provided by the Australian Department of Foreign Affairs and Trade (DFAT).

The intervention combines traditional and new communication channels, including radio, an interactive voice response system, SMS/voice messaging and facilitated listening and dialogue groups (LDGs). In 2015, the intervention in Kratie and Stung Treng was revised to include improved training and support to LDG facilitators, promotion of the program through printed materials and village health promotion events, use of automated voice messages rather than text-based messaging, and increased engagement with health centre (HC) staff and village health support group (VHSG) volunteers. In addition, radio and LDG components were expanded to Mondul Kiri and Ratanak Kiri provinces, using three ethnic minority languages and specifically targeting pregnant women and men's groups, in addition to women of reproductive age more generally. This research aims to evaluate the interventions in each province.

Village Health Promotion Events

Village Health Promotion Events were local events organised by MEDIA One as a way to educate Indigenous Populations (IPs) and Khmer people about RMNH and to encourage them to participate in the LDG's and to listen to the radio broadcasts. They began with music, public service announcements (PSAs) and songs produced in the IP language or in Khmer according to province. They were played over a loudspeaker and a welcome message by MEDIA One and PSL representatives was followed by a briefing on the media broadcasting schedule and a question and answer session to test people's knowledge and understanding of the key concepts of maternal and child health. To encourage interaction, gifts were provided to contestants who answered the questions correctly. Events were held in each province.

Radio Broadcast and Public Service Announcements (PSAs)

Radio broadcasts and PSAs were developed by MEDIA One in partnership with key stakeholders including RMNH experts', health centre and NGO staff. The broadcasts included radio drama productions and live call in shows.

Listening and Dialogue Groups

LDG group leaders were VHSG's who are an existing part of a volunteer community health worker system within Cambodia. For more information on VHSG's refer to the Community Participation Policy for Health (Ministry of Health- Royal Government of Cambodia 2008). VHSG's had been trained by MEDIA One as part of the BCC intervention in facilitation skills and they also received technical RMNH information. The VHSG received a simple Khmer script phone to receive SMS reminders about radio shows and to provide basic reports about their members. During the LDGs facilitators gathered community members together to listen and discuss the live radio broadcasts.

SMS/voice messages and Interactive Voice Response (IVR)

SMS/voice messages were only used in Kratie and Stung Treng. Through SMS, participants signed up to receive relevant RMNH messages. In the SMS system, MEDIA One categorised the arranged groups, particularly the pregnancy women, according to the age of their baby. The participants signed up initially by sending the SMS to the system, by calling to the program, or by attending LDG's

Interactive Voice Response (IVR) system (Kratie and Stung Treng only) is a mobile phone system allowing listeners to call in and hear information about maternity care, including components of pre-recorded radio program and other contents such as a quiz or questions. Interviewees in this research had not used the system, however MEDIA One have completed a small evaluation which may be accessed directly.

In addition, Community based distributors (CBDs) involved in the distribution of contraceptives and Village Loans and Savings Association (VSLA) agents (VAs) were informed about the activities and worked alongside the VHSg's to promote the BCC interventions.

A summary of the intervention activity provided by MEDIA One is presented in Table 1: [Summary of BCC intervention activity](#)

Table 1: Summary of BCC intervention activity

Programme specifics	Kratie	Stung Treng	Mondul Kiri	Ratanak Kiri
BCC intervention period	12months in Phase I (March 2014-Feb 2015), & 12months in Phase II (March 2015-Feb 2016)	12months in Phase I (March 2014-Feb 2015), & 12months in Phase II (March 2015-Feb 2016)	12months in Phase I (Oct 2014-Oct 2015) & 7months in Phase II (Dec 2015-July 2016)	12months in Phase I (Oct 2014-Oct 2015) & 7months in Phase II (Dec 2015-July 2016)
Topics covered				
The importance of pregnancy screening	✓	✓	✓	✓
The importance of iron supplements and tetanus vaccines	✓	✓	✓	✓
The benefits of HIV and additional blood tests during pregnancy	✓	✓		
Pregnancy health care and ANC	✓	✓	✓	✓
Birth preparedness	✓	✓	✓	✓
The consequences of an unsafe abortion	✓	✓		
The importance of staying at health facility before and after delivery	✓	✓	✓	✓
Danger signs before, during and after birth	✓	✓	✓	✓
The importance of delivering at health facility	✓	✓	✓	✓
Newborn health care	✓	✓	✓	✓
Health care after delivery	✓	✓	✓	✓
Contraceptive use	✓	✓	✓	✓
Target audience				
Pregnant women, women of reproductive age	✓	✓	✓	✓
Women who have recently given birth	✓	✓	✓	✓

Fathers	✓	✓	✓	✓
Grandparents	✓	✓	✓	✓
Other carers	✓	✓	✓	✓
Phnong IP's	✓	✓	✓	✓
Tompoun and Jaray IP's	✓	✓	✓	✓
Catchment area				
Districts	Sambo	Thalaboravat, Siembok, and Sesan (Phase I), Siempang (Phase II)	Pichreada, Keoseima (Phase I & II)	Borkeo, Lumphat, Oyadav (Phase II)
Health Centres	Sambo	Srea Krosaing, Chamkarleu, and Kbal Romeas (Phase I), Srea Sambo and Siempang (Phase II)	Keoseima, and Pouchry (Phase I & II)	Kechong, Lumphat, Oyadav (Phase I & II)
LDGs				
Number of LDGs	10 in phase I, and 10 in phase II	10 in phase I, and 10 in phase II	14 in phase I, and 46 in phase II	30 in phase I, and 42 in phase II
Radio Broadcasts and PSA's				
Frequency of play	Bi-weekly	Bi-weekly	Monthly	Monthly
Length of episodes	30mn (Phase I), 60mn (Phase II)	30mn (Phase I), 60mn (Phase II)	30mn	30mn
Number of Episodes	28 (14 in Phase I, and 14 in Phase II)	28 (14 in Phase I, and 14 in Phase II)	12 (6 in Phase I, and 6 in Phase II in Phnong)	12 (6 in Phase I, and 6 in two versions, Tompoun, and Jaray, in Phase II)
PSA frequency	3 times per day	3 times per day	3 times per day	3 times per day
SMS/voice messages				
Frequency	Bi-weekly	Bi-weekly	N/A	N/A
Village Health Promotion Events				
Frequency	2times	2 times	1 time in Phase I 8 times in Phase II	9 times in Phase II
IVR				
Frequency	Monthly	Monthly	N/A	N/A

2. Objectives

Qualitative research was undertaken in all four provinces with the broad evaluation objectives:

1. to assess the effectiveness of different communication methods used within the package with different target audiences.
2. to seek evidence of changes in knowledge, attitudes and practices as a result of the BCC intervention.

This report is presented in two sections, one for each objective.

3. Methodology

3.1. In-depth interviews with community members

A total of 24 interviews were completed in Kratie, Stung Treng, Mondul Kiri and Ratanak Kiri provinces between February 1st and March 7th 2016 using semi structured interview guides, one for male participants and one for female participants (Appendix A, Female and Male). Interview topics included opinions of the different communication methods used, questions to assess RMNH knowledge and exploration of any behavioural change as a result of the intervention. The interview team consisted of one researcher from United Kingdom (UK) and two research assistants from Kratie town. The interview guide was translated from English to Khmer by the Khmer research assistants who also engaged the advice of PSL and MEDIA One staff where required. For instance, on the advice of PSL staff, the term 'birth spacing' was used instead of 'contraception' to improve research participants' understanding. In the case of ethnic minority languages, an additional translator was used, usually a VHSG or a VA working within the VSLA's from that area. In Stung Treng, Lao was one of the main languages spoken, but unfortunately a translator was not available. Participants that spoke Lao also spoke a good level of Khmer, except for one participant whose interview was not completed with as much depth. The interviews were recorded, lasted between one and two hours and answers were translated and transcribed in English during the interview. This allowed the Researcher to ask additional questions when required to gain a more in-depth understanding.

All participants were given a participant information sheet in Khmer which was also read out verbally. In the case of Indigenous population (IP) languages, the translator read out the information sheet in the relevant language. Participants were given the chance to ask questions and a consent form was signed or a thumb print attained by every participant. In some cases, consent forms included signed permission to take photographs for use in case studies. At the end of the interview the participant was given \$5(USD) to compensate for the time away from work.

3.2. Participant selection and attributes

Participants were selected by LDG leaders based on a selection criteria provided by the UK researcher. This included gender, pregnancy status, those that attended at LDG meetings and those that were invited by group facilitators but did attend. In some cases, LDG leaders selected participants who attended the LDG meetings but were not of reproductive age; these were not interviewed and an alternative was found. However, it is important to consider the impact of non-reproductive age participants on community attitude, especially as the older generation had an active role in advising younger people on a number of issues.

Table 2: Interview participant location

and Table 3 provide an overview of the interview participants attributes.

Table 2: Interview participant location

Province	District	Village	Number of participants	Total number of participants
Kratie (Languages Khmer only)	Sambo	Svey Chek	2	6
		Kampong Krabei	2	
		Damrea Krom	2	
Stung Treng (Languages Khmer, Khmer Kek and Lao)	Siem Pang	Phabang	2	6
		Banmong	1	
		Kachan kok	2	
		Khew Svay	1	
Mondul Kiri (Languages	Pechreada	Pou Chrei Chang	1	6
	Keoseima	Gati	2	

Phnong and Khmer)		Srea Ample	1	6
		Pou Tang	1	
		Pou Chrei Chang	1	
Ratanak Kiri (Languages Tompoun and Khmer)	Lumphat	Nong Hia	1	
		Thmey	1	
	Borkeo	Pa Or	2	
		Luehorn	1	
		Salieb	1	
Total			24	24

Table 3: Participant attributes

Age of participants (years)	<20 (n=4)	21-24 (n=6)	25-29 (n=6)	30-34 (n=7)	Unknown (n=1)	
Age of newborn (Months)	1-2 (n=5)	3-4 (n=4)	5-6 (n=3)	7-8 (n=1)	8-9 (n=2)	Pregnant (n=9)
Gender	Couple (n=3)	Female (n=18)	Male (n=3)			
Language	Jaray (n=1)	Khmer (n=9)	Khmer Kek (n=2)	Lao (n=2)	Phnong (n=5)	Tompoun (n= 5)
Number of Children	0/ pregnant (n=2)	1 (n=10)	2 (n=3)	3 (n=5)	4 (n=2)	5+ (n=2)
Occupation*	No formal employment (n=1)	Farmer (n=20)	Seller (n=2)	Teacher (n=1)		
Attended at LDG groups	1-2 times (n=8)	3-4 times (n=5)	5-6 times (n=5)	6+ (n=2)	Never (n=4)	

*The occupation of farmer refers to working on plantations of rice, soya bean, cassava, cashew nuts and sugar cane. One seller worked in a beauty shop selling make-up and another selling sugar cane. The teacher taught primary school level.

3.3. Participatory workshops

One participatory workshop took place with RMNH service providers in each of the four provinces. A semi-structured participatory workshop guide (Appendix B) was developed and two research assistants translated it to Khmer. The workshops were conducted by one or two Khmer research assistants who then translated the responses into English during the workshops. Participant roles in each group are shown in Table 4.

Table 4: Participatory workshop participant roles

Participatory Workshop Roles			
Kratie	Stung Treng	Mondul Kiri	Ratanak Kiri
Health Centre Chief (male)	Health Centre Chief (male)	Midwife (female)	BCC officer (male)
VHSG x 2 (all female)	VHSG x 3 (all female)	VHSG x 4 (3 female, 1	VHSG x 6 (2 female, 4

		male)	male)
Community based distributors (CBD) x 2 (all female)	Health Officer for Save the Children (female)	VA (female)	Midwife (female)
Midwife x 2 (female)			VA (male)
Total = 7	Total =5	Total =6	Total=9

Photograph 1 Drawings from the participatory Workshop workshops



The participatory workshops included creative research tools such as drawing to identify key RMNH messages and timelines to assist recall of the project. The drawing technique was received well and participants appeared to enjoy the exercise. The drawings in **Error! Reference source not found.** depict going to the health centre for health checks, taking iron tablets, eating the right diet, preparing with the husband to go to the health centre for delivery and, in the back, a picture of a woman having tetanus vaccinations.

The timeline proved more difficult as participants struggled to remember dates and the order of events. The exercises were adapted to suit the group.

An additional participatory workshop was completed with the staff from MEDIA One in order to gain their view of the project successes and challenges. The staff included the Program Manager, Senior Program Officer, Senior Monitoring and Evaluation Assistant, Creative Manager and Executive Producer. A semi-structured participatory workshop guide (Appendix C) was developed and translated to Khmer; however, the workshop participants spoke English and so a mixture of English and Khmer was used to capture information.

3.4. Analysis

All interview transcripts (translated and transcribed during the interview process) were analysed using NVivo 10 software. NVivo supports qualitative research through assisting to organise, analyse and find insights in unstructured, or qualitative data (Richards 1999, QSR 2016). Thematic content

analysis which involves coding data and identifying relationships was used to identify recurrent and common themes (Green and Thorogood 2004).

Each interview has been allocated an initial indicating their province and a number indicating the interview participant; M for Mondul Kiri, R for Ratanak Kiri, S for Stung Treng and K for Kratie and a number from 1-6. For example, the third interview in Mondul Kiri will be M3. This method was used instead of pseudonyms to make it easier for the reader to link participants. The case studies use real names where the participants have consented to use their names and photographs. If they did not the above province/number system was applied.

4. Results: Communication Methods

Objective 1: To assess the effectiveness of different communication methods used within the package with different target audiences.

Access to MEDIA

Table 5 summarises the participants access to phone and radio as well as their attendance at the LDGs.

Table 5: Access to MEDIA

Intervention type	Access to media mode and number of participants					Total
Attendance at LDG's	Never (n=4)	1-2 times (n=8)	3-4 times (n=5)	5-6times (n=5)	6+ times (n=2)	(n=24)
Access to Radio	Listens to radio phone (n=3)	Listens to another person's radio (n=1)	No Radio access (n=16)	Radio Owner (n=4)		(n=24)
Access to phone	None (n=11)	Shared* (n=5)	Own Phone (n=8)			(n=24)

*Those who shared a phone, shared with their spouse, neighbour or relative.

4.1. Listening and dialogue groups

LDG Activities

Twenty participants out of 24 had attended the LDGs. They reflected that in the group they would take names and thumb prints each session, followed by listening to the radio broadcasts and then the group leader and members would ask questions and discuss what had taken place on the radio.

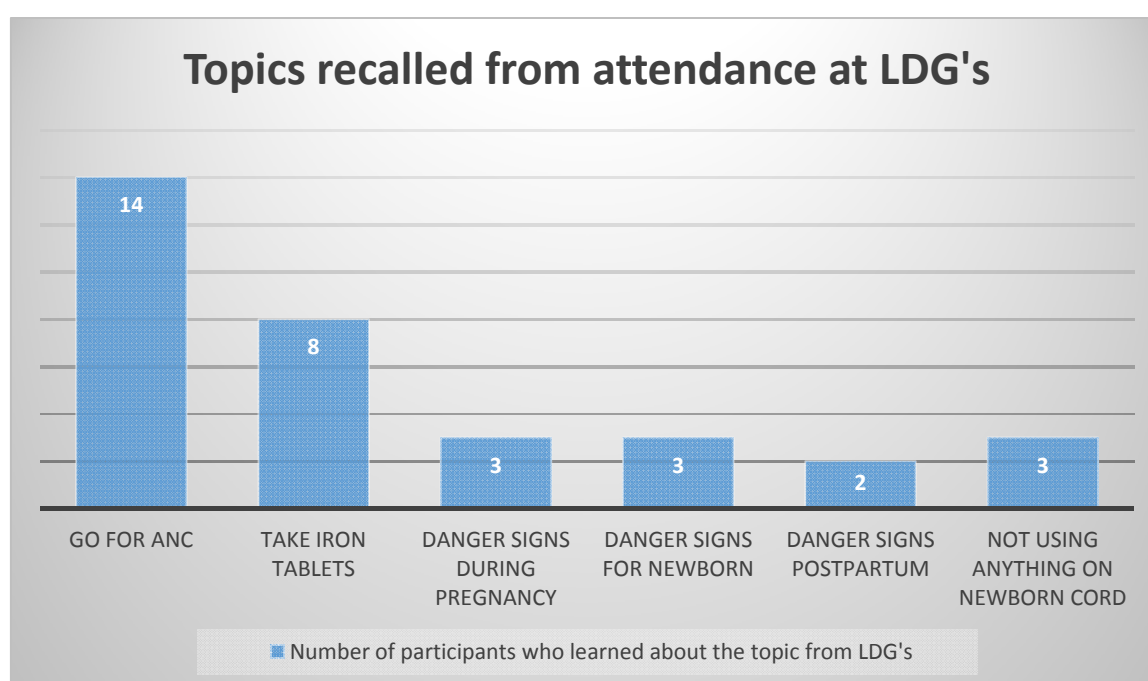
In some cases, the participants discussed making calls to the radio show and receiving text or voice messages that answered questions posed by the group leader;

The [LDG] group calls the radio programme [MEDIA One] sometimes with questions when they don't understand [something]. Sometimes the radio programme is too busy [to answer] and then later a voice message is sent [to the participant's phone]. If someone asks they will send a text message to that person later or to the VHSG if they [LDG participant] don't have a phone, then [the VHSG or participant] will repeat it to the whole group later. (K2, Kratie, age 19, baby two months old, Khmer language)

LDG Topic recall

Figure shows the topics most listed by participants when asked what they learned from the LDGs. ANC and Iron tablets were most recalled for over half of the participants.

Figure 1: Topics recalled from attendance at LDG's



LDG Attendance and group structures

The number of times participants attended at LDG's varies from never to over six times as shown in Table 5 above. Their attendance was dependant on the length of time the groups have been running, their pregnancy status, newborn age and gender. The programme delivery also varied between the provinces. Kratie and Stung Treng had 10 LDGs each delivered in Khmer language only and only targeted females. Ratanak Kiri and Mondul Kiri had 44 groups each, delivered in Tmpoun, Phnong and Jaray languages and targeted IP's and males as well as female groups.

Kratie

Kratie LDGs ran bi-weekly in Sambo District and were mainly attended by pregnant women and women with babies under one year. However, some interview participants spoke of their husbands attending with them. The LDG leaders informed the women one day before the group meeting took

place of when and where to go. One LDG leader stated that she invited anyone who wanted to come and listen, not only pregnant women and women with newborns. Another leader stated that if the women didn't attend the group she would take the information to them in their homes. The community based distributor (CBD) also supported BCC activities by informing the women they visited about the radio broadcasts and LDGs. The CBD spoke about how she also learned information from listening to the radio programme which increased her own knowledge about RMNH issues that she then shared with the community. The radio broadcast in Kratie was supported by the health centre who occasionally played the radio broadcast in the waiting room. However, the midwife stated that she had not played the broadcasts for over five months, as there was a TV programme introduced and she no longer perceived a need to play the radio show.

Stung Treng

Stung Treng LDGs ran twice a month in Siem Pang district between June 2015 and January 2016. The groups had finished and were not running during the interview phase. The three group leaders that took part in the workshop had between five and 15 women attend each week. In Stung Treng the health centre chief representing the health centre replayed the broadcasts regularly;

Since one year, before I was deputy, my health centre was given a USB of the radio show to play when there are many people at the health centre. I play it in the morning because there is more people. Not every day, but mostly on a Monday. The last time I played it was yesterday. (Health Centre Chief, Stung Treng)

During the participatory workshop, the 'Save the Children' Health Officer asked if the Health Chief could please play it every day and he agreed. Considering the MEDIA One contract was finished in Stung Treng at the time of the interviews, this shows a possible legacy after the intervention was complete. The Health Chief further explained that if a person couldn't understand Khmer he would stop the recording and explain it to them further in the local IP language.

Ratanak Kiri

Ratanak Kiri LDGs ran once a month in Lumphat and Borkeo districts. Within Ratanak Kiri province both men's and women's groups were held with the aim of having a total of 44 LDGs running. The group leaders were trained in January 2015 and began facilitating groups in February 2015. The groups were conducted in Tumpoun language and more recently (Feb 2016) in Jaray. One group leader who had been delivering the sessions in Tumpoun language as instructed, also had people that spoke Jaray attend. He translated the information in both languages for the mixed group. The group sizes ranged between nine and 19 participants. The men's groups were only attended by men of reproductive age between 18 and 40 years of age. The women's groups had some younger women, with participants ranging between 15 and 43 years of age. One group that had high numbers wanting to attend decided to restrict attendance to only younger new mothers. The group leader said if there was enough space the older mothers or those who were not yet pregnant could attend. For those who could not attend he instructed them to listen to the radio broadcast at home. This concept of 'too many' community members attending groups only occurred in Ratanak Kiri with one leader. The VA stated that he also supported the programme by communicating the need for women to go to the health centre for ANC and to deliver. The midwife had received leaflets and posters from MEDIA One but did not have a radio to play the programme.

Mondul Kiri

Mondul Kiri groups run once a month in Pichreada and Keoseima districts. Within Mondul Kiri province both men's and women's groups were held with the aim of having a total of 44 LDGs running. The groups were held in Phnong language. Two group leaders said their radio was broken at the time of the workshop but was due for repair by CARE staff. The leader of the men's group reported that women sometimes attended with their husbands. One of the women's group leaders

also reported that two men attended the groups without their wives. Group sizes range from between 10 and 20 participants. One group leader said that sometimes she had no participants at all. In this case she listened to the radio alone and then went to the women's homes to educate them on the topics discussed. The midwife in the participatory workshop stated she didn't know about the listening groups or the radio and so does not promote them. She had leaflets and posters, however she felt these were thrown away and believed that the radio was the best way to communicate as, in her opinion, everyone in Mondul Kiri listened to the radio.

Strengths of LDGs as a communication methodology

The LDGs as a communication method came out as a strong and effective way of transferring information to the communities. The participatory workshops highlighted that groups were better for education as they reached more people than one to one interventions and community members could ask and get answers to questions immediately, therefore understanding the messages better. The group leaders, who were also VHSGs, stated that they also followed up the groups by visiting people in their homes after the LDGs to deliver information about RMNH. Although this approach was not specifically part of the BCC interventions, it is part of their wider role as community health volunteers and so was an indirect benefit of recruiting VHSGs as facilitators. It also means that community members who are unable to attend the LDGs for reasons such as family or work commitments will still receive the messages from the radio show through the VHSGs. When VHSGs were asked about the positives of the LDGs, the leaders mentioned that their own knowledge increased so they could better deliver information to people in their homes.

Behaviour changes from LDGs

Participants were asked what they did differently as a result of learning information from the LDGs. One of the main behaviour changes was attendance at the health centre for ANC. Participants also reported going to the health centre more often than with previous pregnancies and also going to the health centre after spotting a danger sign. Others included improved hygiene, being careful not to fall, not reaching up high, eating a better diet, not working too hard and sleeping enough. M4 in Case Study 1 below shared how she changed not only her own behaviour but shared the information with others.

Case Study 1 - Rev Nang from Mondul Kiri



Rev Nang was 31 years old, had three children and was from the Phnong community. She was a farmer but also has a small shop near her house where she sold a variety of goods to the community. Her youngest child was four months old. During her pregnancy she attended the LDG five or six times, which was delivered in the Phnong language. Rev Nang had not attended the health centre up until her fourth month of pregnancy when she learned from the LDG that she should take iron tablets. At that point she decided to go to the health centre to get them. Throughout her pregnancy she went to the health centre

seven times in total to check the health of her and the baby. When asked what else she learned from attending the group she replied;

Women in pregnancy should not lift things and should not reach up for high things. [They should] go to check their health at the health centre at least five times, take iron tablets, prepare themselves for the arrival of the baby from the

first month to the ninth month and prepare transportation to the health centre. After the baby is born they shouldn't put anything on the baby's cord, only medicine from the midwife. No smoking or drinking rice wine or beer. For the baby [check for] danger signs and when they see one bring [the baby] to the health centre and bring the baby for vaccination to the health centre. After delivery go to check the mother's health one time more.

When asked if she shared this information with anyone she replied;

[I] told my sister and neighbour, when people come to buy things I tell them, tell them all the above. I only tell the people who I know and when I am free. My last baby is stronger than the other two as I had the iron tablet and when I go to the well to wash I tell other women to get iron tablets. My brother got married to a woman from another village and when I visit I tell my sister in law and neighbours not to put anything on the [baby's] cord and other things. In my village now everyone knows everything about maternal and newborn health. Some villagers know about the things but don't practice; not everyone follows, maybe 56% [follow]. I think some don't understand; sometimes they know but don't have small babies [yet].

When asked if she enjoyed the group Rev Nang replied;

Yes, I am very happy because all the villagers can get more knowledge. Before they used to deliver at home now almost all deliver at health centre though sometimes in the rainy season it's not possible so [people] have to deliver at home.

Rev Nang discussed how this pregnancy and delivery differed from her previous pregnancy;

The previous baby after [delivery] was sick a lot, this one not sick. The last baby I never went to health centre but when deliver I did go to health centre. I always follow listening group. [I didn't take] iron with the [last] pregnancy only after the baby was born. The previous baby I ate anything but once I listened to radio I started eating what was advised. My previous baby I put spiders web on the cord and beetles nest, but not this one.

Rev Nang told how her husband and parents helped her make the decision to go to health centre. Her mother is a traditional birth attendant (TBA) and delivered her last child before this one. Now, Rev Nang and her mother tell everyone to go to the health centre. Her mother also goes to the LDGs and tells others that she does not have enough equipment to deliver the babies anymore and tells them to go to the health centre where it is safer.

Challenges and reasons to not attend LDGs

The workshop participants discussed the challenges associated with attending the LDGs. These included a lack of for transportation, floods during the rainy season, timing of LDGs, work or family commitments and lack of motivation.

During the Kratie, Stung Treng and Mondul Kiri participatory workshops timing of the LDGs was mentioned as a challenge to attendance due to demands of making dinner and looking after children. Suggested time of day to hold the LDGs varied including 12-1pm, 6-7pm and 4-5pm. It was thought the men's groups could not start later as they would begin drinking at that time.

The group meetings are at a time when a lot of women would be making dinner at home and taking care of the children...a better time would have been between 12-1pm. (Kratie participatory workshop)

During the Mondul Kiri participatory workshop VHSg's suggested that the community would only attend if they thought an NGO or someone from the provincial administration was coming, as it was thought they would bring a gift. VHSg's also thought they were not respected the same as NGO staff;

They [community members] don't believe the VHSg's have the knowledge, they only believe the NGO knows better. (Mondul Kiri participatory workshop)

Suggested Improvements for LDGs

In the Stung Treng participatory workshop, participants felt that husbands had a lot of influence on the women's behaviour and suggested a men's groups as well as women's should be available;

...they need to have a man's group, if the men understood and had the knowledge they wouldn't let their women work hard. If the husband told the women to not smoke and drink as well as the VHSg maybe they will listen. If men came to join, they wouldn't let their lady work after delivery like two days later, as they think its women's work [only]. Currently no men come to join. (VHSg group leader, Participatory Workshop Stung Treng)

Another group leader added;

I invite them [husbands] to join the meeting but they won't come, if it's for drinking they will come! The men here don't look after their wives, they let them work hard and lift something heavy and take the water up steep hills. The pregnant women go to fish with fish net and some fall down from the boat and get caught in fishing net.

The health officer added that she pitied the women, as they worked so hard.

Interview participants and participatory workshop groups from all four provinces suggested having more groups or to recruit more people to attend them.

Social Diffusion following attendance at LDGs

Participants were asked if they had shared the information they learned at the LDGs with others. The results showed a strong commitment to educating neighbours and relatives. In some cases, women acted as advocates for the intervention by convincing others to join them at the LDGs. Examples of sharing information were given for all four provinces.

My neighbour went with me also. Some women were not pregnant, but just married so wanted to know and they joined the group too. Another family already had a baby at home but now they wanted more knowledge to prepare for the next pregnancy. Ten people in total [I told]. My husband went a few times also. He went because he wants to know more also. He cares for me and goes to listening group to help protect me and help me to stay healthy...I told women who are pregnant and even if they are not. If anyone comes visit I tell them to go to the health centre, on my way to the group if I pass women I tell them to come with me. The women I see or pass that are newly married and will become pregnant soon I tell everything I learn and tell them to come to the health centre. (K2, Kratie, age 19, baby two months, Khmer language)

I told other pregnant lady to go to health centre, they will get better health and tell them to go regularly, when someone has a dangerous sign go to check their

health at the health centre, don't wait until their appointment is due, go straight away. I told them about the bleeding and swollen legs as danger signs to go to health centre immediately...I tried to get others to come with me, some they followed and some not. (S3 Stung Treng, baby seven months old, Khmer language).

4.2. Radio

Radio Activities

Structure of the radio broadcasts varied between provinces. Kratie and Stung Treng had the same radio drama broadcast that lasted 28 episodes and played twice a month for one hour. They also had a radio talk show with RMNH experts where people could call in with questions or discussion points. In addition, three RMNH PSA's were broadcasted per day. The shows were only delivered in Khmer language.

Ratanak Kiri also had a radio drama broadcast that lasted six episodes and played once a month for half an hour in Tompoun language and more recently in Jaray also.

Mondul Kiri had the same structure as Ratanak Kiri but the show was delivered in Phnong language.

Radio Topic recall

The topics recalled by participants who listened to the radio outside of the LDGs are shown in **Error! Reference source not found..**

Figure 2: Messages recalled from the radio broadcasts



Participants from Mondul Kiri and Ratanak Kiri were also able to listen in Khmer to the radio broadcasts that were targeting Kratie and Stung Treng as it was a national radio station. For instance, M5 from Mondul Kiri had listened in Khmer to the radio broadcast on Bayan Station (national) rather than the Mondul Kiri local radio broadcast in Phnong targeted to his area. M5 heard the radio programmes many times;

I have heard information about maternal and newborn health many times on Bayan radio in Khmer. The lady lost the period and went for a test and pregnant lady when she had swollen legs went to check at the health centre. Go to the health centre to get the iron tablet and to check health... it was not the drama,

just only speaking not call in, maybe from the Provincial Health Department. All the lady who are pregnant go to health centre. (M5, Mondul Kiri male, age 27, wife nine months pregnant, Phnong language)

R1 also heard the Khmer broadcast instead of the local Tompoun broadcast;

I have heard on the radio at home before and they spoke about taking pregnant women for health check, and to deliver at the health centre. In Khmer (language) and it was last year. (R1, Ratanak Kiri, male participant, age 30, wife seven months pregnant, Tompoun)

Behaviour change as a result of the radio broadcasts, independent of the LDG's, was difficult to measure. Most participants could not decipher what they had changed as a result of the radio or as a result of information from the LDGs. However, M2 gave some evidence of behaviour change and had not attended the LDGs. She had learned from the radio that iron should be taken to prevent ill health in the newborn and had received iron tablets from the midwife. She took the iron and was actively seeking to find a way to the health centre to replenish her supply.

Radio listening habits

Radio use by province varied considerably. Interview participants were asked if they had access to a radio and if they listened to the radio, their answers are shown below in Table 6 by province.

Table 6: Radio listening habits by province

Radio habits	Kratie	Stung Treng	Mondul Kiri	Ratanak Kiri
Listens to a radio	0	0	5	3
Does not listen to the radio	6	6	1	3
Total	6	6	6	6

In Kratie and Stung Treng none of the interview participants listened to a radio. Within Mondul Kiri five of six and in Ratanak Kiri half of the participants listened to the radio. However, when the question 'Do people in Mondul Kiri listen to the radio?' was asked in the Mondul Kiri participatory workshop, the VHSG's, VA's and health staff estimated that there were only one or two radios per village. They thought that it was mostly the older generation listening to the radio. One workshop participant highlighted that when a news item came on the radio they would share this with those who did not have a radio. In Mondul Kiri they listened to Mondul Kiri channel 65.5 (local channel, Phnong language broadcast) and Bayan channel, 93.0 (National channel, Khmer language broadcast).

Similarly, the Kratie participatory workshop estimated that only 10-20 households out of a possible 200-300 would listen to a radio. Like Mondul Kiri, they felt that it was the elder male generation that listened and that younger women would only listen to the music. One participant stated that Mondul Kiri villagers listened to FM 102, 103, Bupha, Kratie channel and Bayan channel.

The Stung Treng participatory workshop thought that people listened to the radio but not to the channel that the broadcasts were played. This is further detailed below in the challenges section.

The Ratanak Kiri participatory workshop stated that around 70% of the population listened to the radio and that it was a good way to communicate to all ages. The workshop also believed that the women took their radios with them when they went to work on the farms for fear of it being stolen. However, there was no mention of this during the interviews. One group leader said that the elder generation listened to the MEDIA one programme at home and would educate their younger relatives from the information they learned. The Ratanak Kiri workshop also found that the drama in

the Tompoun language meant that the elder generation could understand it more. The radio channel listened to by Tompoun people was stated as 97.5.

In summary there were more people listening to the radio within the IP groups and specifically amongst the older generation. Listeners would benefit by having a choice of language, the local IP language and Khmer.

Radio Strengths

There were a few strengths identified in the participant workshops for using radio as a communication method. One was the use of IP languages in the radio broadcasts.

It's good because it's clear and they can understand, some old villagers only can speak Tompoun so when they want to educate their nephew and niece they can do this because they understand...They like the drama because all the things are education on health and pregnancy. Easy for them [to understand] because in Tompoun. (VHSG, Ratanak Kiri participatory workshop)

In addition, it was thought that the radio broadcasts had a wider audience reach and were especially beneficial for those living in remote areas. The dramas were well liked and when community members began to listen they wanted to listen more.

Radio Challenges

Radio channel and timing

The group leaders in the Stung Treng workshop spoke about the importance of getting the right radio station, time and language when broadcasting messages:

The people in Siem Pang [Stung Treng] listen to the radio but they don't listen to the MEDIA one programme because they listen to the Ratanak Kiri channel as its more clear. They do listen to Bayan but not the [Khmer] show. Sometimes at 11.30am the villagers are still at the field. 12-1pm is better because they don't hear it when it plays at 11.30pm. We tell the people to listen at home also. The best time to have a radio show is around 12-1pm, on Bayan and other channels. (Stung Treng Participatory Workshop)

When asked if the radio was a good way to communicate they added:

It's good to educate this way [by radio], because the VHSG can listen to radio and then take the information to the people. The radio alone is not enough to educate people because they listen sometimes but different channels. (VHSG, Stung Treng Participatory Workshop)

When asked what they thought of the call in show they felt the women often could not use a phone and that they would prefer the drama. Once they had started listening they were more likely to want to listen to find out what happened.

Language choice

The choice of language in which to broadcast is important to achieving the widest possible audience. There was evidence that due to marriage there was migration between IP communities and Khmer populations. M3 is of Khmer origin but lives in the Phnong community, and she was unable to understand the radio broadcasts targeted for her:

I listen in the morning but it's in Phnong and I cannot understand, later on I listen in Khmer. I listen but only for 10 minutes and all I remember is to eat vegetable. (M3 Mondul Kiri, age 32, nine months pregnant, speaks Khmer but lives in a Phnong population, speaks some Phnong)

It is fortunate that the Khmer broadcasts aimed at reaching Stung Treng and Kratie could also be heard on a wider footprint. This has benefited a number of individuals who live in the IP communities but can only understand Khmer. In addition, for the two participants whose first language was Lao they may not have understood the Khmer broadcast. MEDIA One also found during their research that a large number of residents in Siem Pang district were of Lao origin.

Suggested improvements for radio broadcasts

The main improvements suggested were to investigate the radio channel most listened to and to adjust the timings to suit the audience. In addition, the workshops thought the broadcasts needed to be aired more frequently and that once or twice a month was not sufficient. One participant suggested daily broadcasts.

Ratanak Kiri participatory workshop suggested a DVD would help bring the radio drama to life:

Tompoun people are hard working so cannot attend many groups, they would like the TV or DVD, they want to see the drama. They will learn more. Radio programme with same actors and they can follow with video DVD. (Ratanak Kiri Participatory Workshop)

Social diffusion following listening to radio broadcasts

Although there is no direct evidence of social diffusion, there was some discussion of elders listening to the radio and guiding their younger relatives based on their new knowledge. The role of elders in the community is a respected and knowledgeable one which could be used to benefit the overall communication of messages whilst adding value to them. This highlights the importance of having radio broadcasts in IP languages, for the elder generation, and in Khmer for the young and migrating populations.

4.3. Village Health Promotion Events

Activities at Village Health Promotion Events

Nine out of 24 participants had attended an event, three from Kratie, three from Mondul Kiri, two from Ratanak Kiri and one from Stung Treng. The interview participants that had attended their local event were asked what they liked most about the event. The most popular response was the question and answer session and the resulting gift.

Topic recall from attending Village Health Promotion Events

The topics recalled from the village health promotion events were contraceptive use and options, danger signs, dietary advice for pregnant women and newborns, having a check health at the health centre, taking iron tablets, delivering at the health centre and vaccinations.

Audience at Village Health Promotion Events

The participants from the participatory workshops commented on the people who had attended the events. The estimated number of people in each event ranged from smaller groups of 25-40 in Stung Treng to 60 in Ratanak Kiri. The Stung Treng event was held during the rainy season so experienced less attendance. There were mostly women who attended but it was estimated that around 10-20% of men also attended. Younger women attended if they were not in school and specifically if they had just married and so had an interest in learning about maternal and child health. The VHSGs stated that it was a good way to inform the community members about the radio broadcasts and about the LDGs. For example, a VHSG from Ratanak Kiri participatory workshop thought it was a good way to advertise the LDG groups in order to gain more members.

Around 60 people [attended] ... it's good at getting people to come to the small group [LDGs] for the radio. The big event and big speaker allows all villager to understand as it's in Tompoun, then they will come to the LDGs. The facilitator [at

the event] asked questions and participants answer and get gift, so much technology [radio, loud speaker, music]. (VHSG from Ratanak Kiri Participatory Workshop)

Strengths of Village Health Promotion Events

The strengths associated with the Village health promotion events are described below:

- ✓ The villagers can remember the messages for longer and it increases knowledge of RMNH issues.
- ✓ They are a chance for villagers to hear the broadcasts again when they are replayed.
- ✓ They create a good mood in the community and the events are enjoyable.
- ✓ Activities are delivered in the local languages.
- ✓ They are a good opportunity to raise awareness of the radio broadcasts and LDGs.
- ✓ Question and answer sessions with a gift are a good motivator.
- ✓ It is an opportunity to reach many villagers at once.

Many people came, all ages, male and females, they [facilitators] talk, and give question and answer [activity] with gift. I like it because I want to know more and it was happy and light. (M5, Mondul Kiri male, wife nine months pregnant, Phnong language)

Last August the event was good, when they answer the questions they [community members] can understand more about what is being spoken of and then they get the gift, they will know more and many people come to join. (Stung Treng Participatory Workshop)

Challenges

The only challenge discussed were the challenges associated with travel and having events during the rainy season and that some villagers may be at work or school during the time when the events are on.

Social diffusion

Some participants shared the information they learned from the event with other family/community members including not putting anything on the baby's cord and keeping the baby clean.

4.4. SMS/voice messages

Activities for SMS/voice messages

SMS/voice messages were only sent to Kratie and Stung Treng residents. In July 2015 text messages changed to voice messages and phone numbers were accessed through health centres and LDG leaders. The Health Officer for Save the Children supported MEDIA One by collecting phone numbers of pregnant women to send SMS or voice messages to; she stated that over one year they sent 14 texts.

Phone ownership between provinces was similar in that some had access and some didn't with no specific trend; however, in Ratanak Kiri, within the Tompoun population, only one person (male) had a phone.

Topic Recall from SMS/voice messages

The following topics were recalled by participants who had received a message and could remember what they were about.

K2 recalled that she received a message about danger signs on her neighbour's phone.

Danger sign was received as a text message from the radio programme which is about swollen face, hands and legs. Headache, dizziness and bleeding, and not allowed to lift something heavy, they introduce many but I can't remember now. (K2, Kratie, Age 19, baby two months, Khmer language)

K4 said she received many messages but sometimes she couldn't listen to them all, she only knew they are about mother and child health.

Mother and newborn health, can't remember specifically, sometimes I could not finish listening because I was in a meeting or teaching sometimes (K4, Kratie, couple interview, five and a half months pregnant, Khmer language)

K5 received four messages and shared the information with her neighbour and some pregnant women:

I got a message. They said eat the food like, eggs, fish, veg and fruit. Around four messages, the last time they said the newborn should breastfeed many times, around twelve times a day. Last message came when I was pregnant. (K5, Kratie, age 25, baby three months old, Khmer language)

S1 said she received messages but couldn't remember what they were about, she thinks about pregnancy and HIV.

Audience receiving SMS/voice messages

Five participants out of a possible 12 received either a text or voice message depending on what stage of the project they signed up. Four were from Kratie and only one was from Stung Treng. Out of the four from Kratie, two shared a phone and two owned their own; one was a male participant.

K1 was an interview with a couple, where the husband had received text/voice messages but did not tell his wife.

They said how to take care of the baby, mother, I carry the phone so only I ever hear the message...No I didn't tell her about the messages when I came home. (K1, couple interview, age 28, Kratie, baby two months old, Khmer language)

K2 received messages through her neighbour's phone but she had to wait for her neighbour to give her the phone and then she checked to see if there were any messages for her. The neighbour did not come over and tell her and so she didn't receive them in a timely manner. Interview participants also stated they did not always have the time to finish listening to the message.

Strengths of SMS/voice messages

The only strengths highlighted were from the Kratie Participatory Workshop who felt that it was good that the messages were different every time and so covered more topics such as danger signs and contraceptives. Also it was felt that it was good thing that when the messages arrived on their phones they kept ringing until they were answered. The VHSGs thought it was a fun way of communicating as the recipients would expect a text and get a voice instead. No other strengths were mentioned by interview participants or by the Stung Treng Participatory Workshop.

Challenges of using SMS/voice messages

There were varying views expressed in the participatory workshops regarding SMS/voice messages. Some thought it would disturb the women at work, others felt that it was mainly the men that had the phones and not very many women so they would not receive the messages. Another felt it was a good way to educate the women and that the men would share the message with their wives. It was also felt that face-to-face communication worked better than written or voice messages. There was no other feedback from the interviews.

Social diffusion of SMS/voice messages

There was only one incident where a participant shared the information with her neighbour and other pregnant women.

4.5. Reading and writing ability

Although there was not a specific question related to reading and writing ability, seven participants discussed this as a barrier to remembering information from the LDGs, reading text messages or gaining information from posters or leaflets. When participants were asked what they remembered from the different communication methods they replied with a few messages and expressed frustration that their lack of ability to write means they couldn't remember any more.

Research undertaken by MEDIA One in Kratie and Stung Treng found that 85% of participants had reached a maximum of primary level education or less, with 30% having had no education at all.

4.6. Missing population segments

There was evidence from the interviews that some population segments were not being reached by any of the communication methods. The following population segments and quotes illustrate such segments.

Women that work away on a farm for long periods of time

K6 only went to the health centre once, she was eight months pregnant and described how it was not possible to visit the health centre at an earlier stage:

During my pregnancy I stay at the farm field and it is very far from here [health centre]so I cannot go. At eight months I wanted to know if I should deliver at the health centre or at home. I went to ask the midwife what to do. I also wanted to check my health, even though my health was ok, the midwife said to deliver at the health centre. (K6, Kratie, age 25, Kampong Krabei Island, age 25, baby four and a half months old, Khmer language)

K6 was also unable to attend the LDG's and did not have access to a phone or a radio. There are many women that work away on the farms and this population is missed by all the communication methods. K6 stopped working on the farm fifteen days before delivery. Her recollection of danger signs, dietary intake and health pregnancy was lacking.

This is a common theme among participants, as the majority of LDG members work on farms or fishing they are unavailable to attend the groups during specific seasons. This was given as a barrier to attending LDG's by K5, R5, S1, S2, and S3 and was also mentioned at the Stung Treng participatory workshop.

I stopped going to the [LDG] groups because I was busy and didn't have time to go, I had a lot of work to do in the family and had to go to the field to grow Cassava and to look after the crop (R5, Ratanak Kiri, age 30, baby eighteen days old, Juray language)

Women from Stung Treng who speak Lao and rely on TBA's

S2 was nine months pregnant and had never been to the health facility which was only 200meters from her home. When asked why she didn't attend the health centre, she said there was nothing wrong so there was no need to go. She also said she was too busy to attend the LDGs. Her first language is Lao with very little understanding of Khmer and she had no access to a radio or a phone. She couldn't read or write and had very little education. Her husband spoke more during the interview as he understood Khmer better than S2. S2's husband believed it was the Lao tradition to give birth at home, and not to engage with health services:

I also tried to push her to go to health centre but she won't go. I don't know how to force her so I leave it, no point in going as nothing wrong with her. My mother [a TBA] got a certificate to deliver [babies] at home and I think my mother is better than the midwife to [help deliver] at home. My mother always checks her [S2's] health and she checks if the baby moves or something like that. When she is eight months and nine months my mother checks if the baby is in the right position. (S2, Couple interview, Stung Treng, female aged 33, husband speaking, Khmer language)

When the couple were asked about danger signs for pregnant women they could not name any. For the wife this could have been a language issue as her Khmer was very basic so her husband answered:

In my opinion no one in this village delivers at the health centre...my mother, she is TBA ...when someone can't deliver at home easily then she brings them to the health centre.

S2 has several barriers to learning RMNH, her lack of education means she relies on traditional methods of practice, her minimal understanding of Khmer means that she is excluded from understanding any of the communication methods and the reliance and trust of the TBA, as her mother-in-law, will mean she has little motivation to go to a health centre or learn information for herself.

5. Results: Behaviour Change

Objective 2: To seek evidence of changes in knowledge, attitudes and practices as a result of the BCC intervention.

This section will be broken up into the following topic areas:

Pregnancy Awareness
Antenatal Care
Healthy pregnancy
Iron Supplements
Traditional /Modern Medications
Behaviours women should not practice
Birth Preparedness
Danger signs: Pregnancy
Delivery
Healthy Newborn
Breastfeeding
Danger signs: Newborn
Danger signs: Postpartum
Postnatal Care
Birth Spacing
Abortion

5.1. Pregnancy awareness

The majority of participants believed they were pregnant after missing a menstrual period or from feeling nauseous. Following this awareness four out of six participants in each province went for a

pregnancy test at the health centre. Some chose to have a pregnancy test at home or not at all, M3 describes how she did not know she was pregnant until the baby moved:

No test at health centre, I used to use birth spacing but then stopped and because I didn't have a period during injection I didn't know I was pregnant as I wasn't used to having periods, I only knew I was pregnant once I felt the baby move. (M3 Mondul Kiri, age 32, nine months pregnant, speaks Khmer but lives in a Phnong population, speaks some Phnong)

Only three of 24 participants undertook a pregnancy test at home. Out of these, two women went to the health centre for a check within a month of the test, the third went to the health centre at three months to get iron tablets. After this she attended the health centre seven times and was a regular at the LDG's.

M1 specifically recalled the radio drama she heard whilst attending an LDG group:

...[the] lady missed her period and went to [the] health centre for testing and then to get iron tablets, and get blood tests. (M1, Mondul Kiri, age 17, baby four and half months, Phnong language)

Two other participants recalled from the LDG, that following a missed period, women should go to the health centre. Another heard from the radio broadcast at home and another reported hearing a radio show with a health professional (possibly someone from the Provincial Health Department) advising women to go to the health centre for a pregnancy test following a missed period.

Case Study 2 R2 from Ratanak Kiri

R2 did not have a pregnancy test but knew she was pregnant when she missed her period. She stated that she was eighteen years old and this was her first baby. R2 was eight months pregnant at the time of interview. Her first encounter with a health professional was an outreach midwife who gave her iron tablets when she was two months pregnant.

At two months pregnant the midwife came to my home and gave me some iron tablets. I was five months [pregnant] when I first went to the hospital because I wanted an echo to see if it's a boy or girl... My husband took me to the hospital. We discussed the decision together...then again at six months the midwife came to my home to give iron tablets but small amount again. [At] eight months I went to [the] health post to get iron tablets but they didn't have iron tablets for me so I had to go to the hospital. I took 77 tablets so far and now they are finished. (R2, Ratanak Kiri, age 18, eight months pregnant, Tompoun language)

R2 went to the LDG every month but her recall of danger signs, labour signs, healthy pregnancy and newborn was minimal. She had also heard the radio drama broadcast in Tompoun. However, the only messages she could recall were to go to the health centre four times during pregnancy and if there was a danger sign. R2's main sources of information were family, the midwife and VHSG rather than the BCC communication methods. For young women like R2 the BCC messages seemed difficult to retain, process and translate into practice. She stated that her family and husband would decide where she would give birth and that it was normal to have the baby at home. The travel to the hospital was far and expensive and so it was easier to give birth at home. We asked R2 where she would like to have the baby if it was her decision and she seemed conflicted by knowing that it was safer to have the baby at a health centre but that the norm was to give birth at home with a TBA. For R2 and some of the other younger participants', one-to-one contact seemed a better way to communicate messages. The role of family was also key for young mothers and communication methods targeted to older members in the family may improve overall knowledge, attitude and practice of the new young mothers.

5.2. Antenatal Care (ANC)

The message to go to the health centre during pregnancy for a health check was clearly understood by nearly all participants. Figure 3 highlights some of the reasons for going to the health centre during pregnancy.

Figure 3: Reasons given for going to the health centre



The perceived recommended frequency for ANC ranged from three times during the entire pregnancy to every month. Kvas Pchen believes its best to go every month, her story is told below.

Case Study 3 Kvas Pchen from Ratanak Kiri



Kvas Pchen was sixteen years old, six months pregnant and was of the Tmpoun indigenous people. Within the Tmpoun population it was common to get married very young, around the age of thirteen years old and to begin a family soon after. The local CARE staff who acted as translator stated that this was normal practice and it was common for women to have four children by the age of 20. This is Kvas Pchen's second pregnancy. Sadly, the first baby was premature and died three days after birth. For her current pregnancy the VHSG, who had been trained by MEDIA One, supported her to make

the decision to go to the health centre for a check every month. At six months of her pregnancy she had been to the health centre five times, accompanied at first by the VHSG and later on with her husband, Rochom Chong. Kvas Pchen said with her previous pregnancy she was too shy to speak with the health centre staff but she had now overcome this because she had attended the health centre many times. The midwife gave her iron tablets and she tried her best to take them as instructed, but if she felt sick she stopped and when she felt better she took them again. The midwife told her not to take any type of traditional medicine and she followed the advice. Kvas Pchen began attending the LDG meetings the previous month and had learned the importance of ANC and delivering her baby at a health facility. She told us about her delivery plans:

“I will go to the health centre to deliver the baby, because at the health centre there is enough equipment and staff and I am afraid to stay at home as its dangerous. I will go by moto, with my husband, and brothers and sister”.

After the baby she planned to use contraceptives to ensure her next child was not born too soon. Kvas Pchen does not have a phone or a radio and so this face to face support from the LDG and VHSG was imperative to her learning. We asked Kvas Pchen’s husband what he will do to support the pregnancy? He had already saved \$150 dollars and tried to make sure his wife had enough food as he believed if the mother was healthy the baby would be too. He said she should also not work too hard or lift anything heavy. Kvas Pchen shared the information she learned from the LDG groups and the radio with her husband and her family. Rochom Chong’s response reflected the messages being communicated by the PSL intervention.

Challenges of attending ANC

Many of the women interviewed relied on their husbands or other male family members for transport to the health centre and in some cases appointments were missed if the husbands were busy working in the fields. K2 explains how many times she went to the health centre and other challenges she faced when trying to get to the Health centre:

I went three times, I went when my husband could take me but then he became busy with work and could not take me and no one else could take me either...the transportation is ferry and motorbike. When the waves come... I am afraid during wind as I am scared of falling out of the boat or the boat sinking from the water coming in. (K2, Kratie, age 19, baby two months old, Khmer language)

For remote areas in Kratie, Mondul Kiri and Ratanak Kiri the climate, road quality and duration of travel made it very hard for women to get to the health centre. Stung Treng roads was not identified as a challenge as the health centre was nearer to participants. Some participants lived over 30kilometers from a health facility and the roads were very bad. It was often costly and during the rainy season sometimes impossible. M4 talks about the challenges of the rainy season:

The road is very bad, especially in the rainy season when it’s flooded. My husband made a small boat to help me go to health centre to check my health. [This was to go over the road as it was flooded].Before they [other villagers] used to deliver at home, now almost all deliver at health centre but sometimes in the rainy season it’s not possible so have to deliver at home. (M4, Mondul Kiri, age 31, baby four months old, Phnong language)

The participatory workshop in Kratie highlighted the cost of travel as a main challenge that hindered knowledge into practice:

.... especially for the poor, the island transportation is more expensive... if the villagers don’t have enough money they can’t come even if they have education so what can they do? (Participatory workshop in Kratie)

This was reflected by K4:

That’s why I couldn’t make it to see the midwife when I had an appointment, because not enough money so I waited until I had enough to go. The cost is food, fuel and buying some stuff, because when [you live] far away [from markets/shops] you have to buy [food and other supplies] when you can. (K4, Kratie, couple interview, five and a half months pregnant, Khmer language)

However, over half the participants stated there were no challenges to accessing a health facility. Several participants reported new roads and new health facilities had removed previous barriers. Four participants also reported that they were able to have an ANC appointment at home with an outreach midwife. The women seemed to be the main decision makers when deciding to go or not

for antenatal checks, with the husband and family supporting the decision where possible. VHSG's also had a role in advising on the best choices and are respected.

Source of information

The ANC messages came mainly through LDGs and the radio at home. Sixteen out of 24 participants made reference specifically about going to a health facility to check health during pregnancy. There were no differences between provinces. The messages recalled from the LDGs and radio included going for a health check regularly or if there was a problem, danger signs for mother and newborn and to get iron tablets. During the participatory workshop in Stung Treng the midwife commented that the women are now coming to the health centre for ANC.

I didn't know anything before going to the group, now I know more. The radio tells me about the danger signs and to go to health centre and then I went after hearing this. The drama showed me an example that the mother didn't go to health centre when she had danger signs and then she died. This scared me and made me go. (K2, age 19, Kratie, baby two months old, Khmer language)

Its good because they [women in the village] change their behaviour, before they didn't go to check [ANC] and now they do. When they [VHSGs] go to educate them at home they always follow. The same if they [women in the village] come to the group. They understand more. (Stung Treng participatory workshop)

Participants didn't mention hearing about ANC or going to the health centre from a SMS or voice message or from the Village health promotion event.

Knowledge into practice

The majority of participants met with a health professional four times or more and first attended during the first trimester. S2 had never attended the health centre or any of the groups, spoke Lao and did not understand the Khmer Radio broadcasts (see page 28 for further information about S2). Table 7 below shows ANC attendance by pregnancy semester and the number of visits with a health professional.

Table 7: ANC attendance

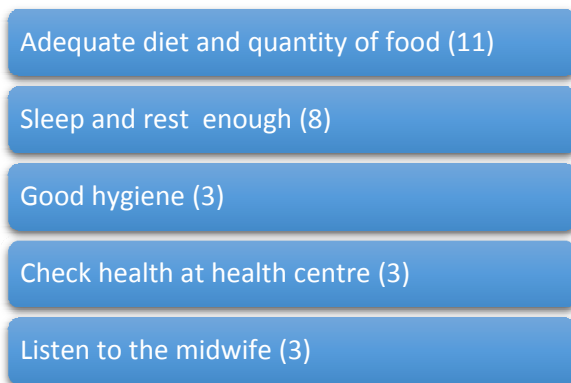
First visit with health professional	First Trimester (n=19)	Second Trimester (n=3)	Third Trimester (n=1)	Never (n=1)		
Total number of visits with health professional	Never (n=1)	One (n=2)	Two (n=3)	Three (n=3)	Four (n= 5)	>Four (n=10)

The participants who had visited a health professional only once or twice were mostly early on in their pregnancy. Participant R1 was a male from Ratanak Kiri who spoke Tompoun and Khmer. He was aware that his wife needed to go to the health centre; she had attended at two months to have a pregnancy test and again at three months, but he had been busy at work and had not found time to take her again. He had the phone number of the midwife and if there were any problems he said he would call her. He had been to the LDG group three times and had also heard a radio broadcast in Khmer at home. This would have been the broadcast aimed at Kratie and Stung Treng residents. He heard about the importance of ANC through both of these communication methods.

5.3. Healthy pregnancy

All participants were asked ‘What should a woman do to have a healthy pregnancy?’ Figure 4 shows the healthy pregnancy sub-themes that arose. They are presented in order of frequency. The numbers refer to the number of participants that generated a comment in that theme.

Figure 4: Healthy pregnancy sub-themes



Only two participants recalled the importance of having tetanus vaccinations during pregnancy and both were from Mondul Kiri.

One participant said to follow the advice on the radio programme and another stated you should drink milk. One couple discussed avoiding conflict:

Do not fight within the family, eat enough food, enough sleep, the wife not to get angry with husband (K1, couple interview, female age 28, Kratie, baby two months, Khmer language)

A similar comment arose in answer to the question, ‘How did your experience with the last child born compare with your previous pregnancy and birth?’

Last time there were no listening groups, food [eating habits] were the same but now I try not to get angry and think too much after I learned this. If the parents are happy the children will be clever. It’s all up to my husband if he is angry everyone is angry! (K4, couple interview, Kratie, five months pregnant, Khmer language)

Both of these participants were from Kratie, though from different villages.

A separate question was asked regarding what women should eat when pregnant. The following foods were mentioned:

- Fruit and Vegetables were the main reference, almost all participants made reference to this food category.
 - Vegetables included morning glory, pumpkin, green vegetables, cabbage, taro, potatoes and lettuce
 - Fruit included banana, coconut, pineapple, apple and grapes
- Proteins were next with most participants referring to this food group. Specific foods included, meat, fish, eggs, pork, animal insides, chicken, frog and snail.
- Some participants discussed food categories as power foods, protection foods and building foods.
- Few participants talked of carbohydrates such as rice and noodles.

Source of information

Some participants mentioned LDGs, radio broadcast and SMS/voice messages as sources of information, however these were few and there were no identifiable trends.

Knowledge into practice

Challenges associated with achieving a health pregnancy were; barriers to attending the health centre due to transport difficulties and cost; and not being able to afford or access the necessary foods. Nearly half of the participants specified challenges to achieving the correct diet as per below:

Sometimes they [pregnant women] cannot follow the right food as its difficult to find, unless they go to the market across the river. (K4, couple interview, Kratie, five months pregnant, Khmer language)

I don't have enough food, because not enough money, as my sons cannot earn enough money yet, as they are only fifteen years old. (M3 Mondul Kiri, age 32, nine months pregnant, speaks Khmer but lives in a Phnong population. Speaks some Phnong)

[Pregnant women should] eat three times, eat veg, meat, sometimes [there is] no meat, not enough money [to buy] and not any animals in the forest like before. (R4, Ratanak Kiri, age 16, six months pregnant, Tompoun language)

5.4. Iron supplements

Nearly all participants made reference to iron supplements, which will now be known as Iron tablets, as described by the participants. This was one of the most cited messages from the interviews.

Source of information for iron tablets

Eight participants recalled hearing the message to take iron as part of a healthy pregnancy at the LDGs and all of them took the prescribed 90 tablets during pregnancy. They recalled that women should go to the health centre and take the iron tablets before and after pregnancy. An additional four participants heard about taking iron from listening to the radio at home and all four took the prescribed 90 tablets during pregnancy. M2 had heard radio programmes in both Phnong and Khmer and specifically remembered the importance of taking iron. Her story may be found in Case Study 4 Nhert Srob from Mondul Kiri on page 31.

Knowledge into practice

The iron tablets were issued by the midwives when the women went to the health centre or during a midwife outreach visit. Most participants took them as instructed. Some had nauseous side effects and so stopped taking them until they felt better then resumed as instructed. One participant had a rash and was required to take other medication so stopped taking them. A participant had not seen a health professional so had never received iron tablets. Reasons given for taking iron were related to the health of the baby; to make the baby healthy, strong and clever. Some participants said they took iron because of advice from the radio, LDG's or midwife.

They [midwife] gave me some iron tablets. I have been taking it but have two tablets left. I take them to protect the baby, so the baby won't have a disability. I take them every night as the midwife tells me. (M2, Mondul Kiri, age 26, four months pregnant, Phnong language)

The midwife told me to take the iron to make the baby strong, clever and have all the right parts. (S6, Stung Treng, age 30, baby five months old, Khmer Kek language)

Over half of the participants had taken the recommended number of tablets for their pregnancy status. Some participants mentioned taking Iron tablets postpartum and one participant recalled taking 42 tablets specifically.

[I got] 60 tablets for iron the first time [from health centre] and 30 the second time. I took them all and never missed a day...I took the iron tablets and also after

the delivery 42 tablets more. (S5, Stung Treng, age 23, baby eight months old, Khmer language)

I took 90 [iron] tablets and I took them all, not every day as sometimes I felt sick but I took them until they were all gone. (K3, Kratie, age 28, eight months pregnant, Khmer language)

5.5. Traditional or modern medications

Two traditional medicines were mentioned by participants, a mixture of wood bark and hot water to be taken during pregnancy and rice wine to be taken after delivery.

Source of information

The influence to use rice wine came from the elder generation. The husbands took on the task of making or seeking out the medicine.

Knowledge into practice

Three participants, one from Mondul Kiri, Ratanak Kiri and Kratie mentioned using traditional medicines:

She took the skin of a tree that is believed to help have a fast recovery, Putri skin and Tamarin skin. I made the medicine and learned from common knowledge and my mother. (K1, couple interview, woman age 28, husband speaking, child two months old)

The women took rice wine in small quantities after the baby was born. The mothers described the amount as one or two water bottle caps per meal.

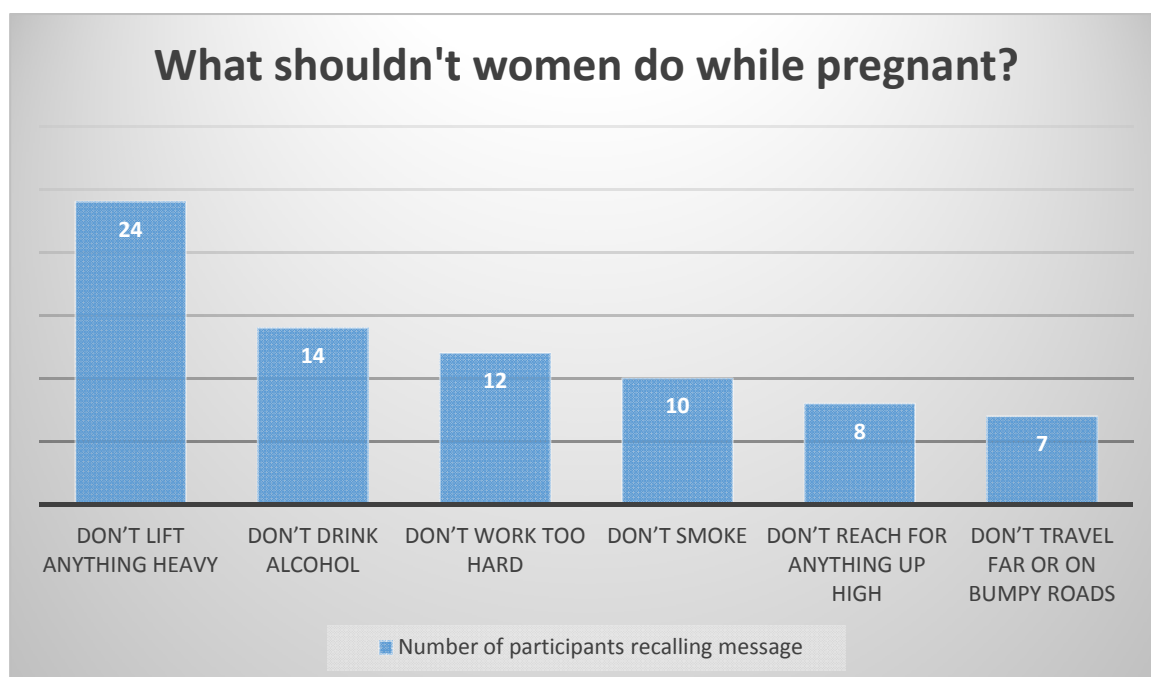
Drinking rice wine mixed with wood of skin, seven litres since baby was born, I started after the roasting. I drank for a month and ten days, after each meal, three times a day. To help the body heal. My husband buys this rice wine from the traditional healer and it is pre-made. We learned this from the elder people in the village. I drink it before each meal so the meal tastes better. We drink it because some food makes the mother sick like fish but this helps to not vomit. (K1, Kratie, woman age 28, baby two months, Khmer language)

The participatory workshop in Stung Treng estimated that only 10% of all women in the villages still used rice wine and mostly those that resided further away from the towns. Although both medicines are still used in all provinces, the majority of participants did not use rice wine as they had been told not to by the midwife.

5.6. Behaviours pregnant women should not practice

All participants were asked 'What things should a woman not do while pregnant to make sure she stays healthy?'. The answers they gave are presented in Figure 5 with the number of participants who spoke of the issue.

Figure 5: What shouldn't women do while pregnant?



Others included don't sleep on a hammock in case you fall out (2), don't fall over (1), don't cut wood (2) don't take any traditional medicine (2) or tablets not from the health centre (2), don't eat porridge or eggplant as the women's water will break early (1), don't cook (1), don't eat something that makes the mother hot (1) and don't stand for a long time (1).

Source of Information

When the participants were asked where they had learned this information, the most common answer by 13 participants was from the midwife or health centre. After that sources of information include LDG's (4), radio (4), neighbour/villager (4), VHSG (4), leaflets/posters (3), NGO staff (2) and the elder generation (1).

Knowledge into practice

'Don't lift anything heavy' or 'work too hard' were both highly recalled, however participants that were pregnant during the rice harvesting period worked in the fields until their eighth or ninth month, with some working until the day of delivery. One participant said she tried to do lighter work but another indicated that women should work during pregnancy:

I worked until nine months. Elders told me I should work until then as it is [would be] easier to deliver the baby. I believe this is true. The old people told me if I work a long time the baby will be the same [work hard]. The old people said don't eat something on the step [stairs] as it will be difficult to deliver the baby, drink the coconut [milk] and the baby would be better and the skin would be lighter. Also not allowed to eat standing up and doing things. (S3 Stung Treng, age 22, baby seven months old, Khmer language)

This was similarly reflected in the Stung Treng participatory workshop:

...elder generation, they have many children and they work hard until delivery and they are never sick. They say the new generation doesn't work hard and it makes them weak. Elder people say roasting is good. (Stung Treng participatory workshop)

‘Don’t Smoke’ was followed by most participants, with only five smoking. Four out of the five were from the Tompoun community in Ratanak Kiri and one from Stung Treng who spoke Lao as her first language. The tobacco products were not pre-rolled cigarettes but tobacco rolled in a leaf.

I smoke but not drink. I was around eight years old when I started to smoke. (R4, Ratanak Kiri, age 16, six months pregnant, Tompoun language)

I smoked during pregnancy, but when the baby was delivered I stopped. When I smoke I not feel good. (R5, Ratanak Kiri, age 30, baby eighteen days old, Jaray language)

The participants who smoked ranged in age from 16 to 34 years old. This contrasted with the opinion of the participatory workshop in Mondul Kiri who stated that:

During pregnancy they still drink and smoke because of habit that was formed when they went to take the buffalo to the field and they smoked to get the mosquito away... the older people from thirty years plus do [smoke] more. New mothers less than thirty [years old] not many smoke, not so much. The NGO [unknown] give messages to the new generation and they don’t smoke and drink because they have education. (Mondul Kiri participatory workshop)

Only one participant **drank alcohol**. She was certain she had never been told not to drink alcohol from a health professional or any of the BCC interventions, only not to smoke.

...during pregnancy it’s ok to drink the wine, its normal, not heard anything to say otherwise, nothing said at groups [LDGs], if they told me maybe I not drink. I don’t smoke. I thinks it’s not good to smoke, I heard this from the radio at home...I drank during pregnancy and if someone calls me I will go now [to drink], I drank two glasses of wine. (M3 Mondul Kiri, age 32, nine months pregnant, speaks Khmer but lives in a Phnong population, speaks some Phnong)

The advice to **‘not travel far’** is also difficult for women who live far away from health centres on poor roads. This advice can be contradictory and should be made clear as to when it is ok to travel far, such as to go for an ANC appointment at a health centre.

5.7. Birth preparedness

Participants were asked ‘What should a woman think about when making preparation plans for the newborn? Table 8 displays the answers given, along with the number of participants that recalled the preparation.

Table 8: List of birth preparations

Prepare the clothes (23)	For the mother, e.g. long skirts, clothes for baby, hat, scarf, gloves, socks, cap
Prepare money (16)	For food, transport, clothes
Prepare transportation (13)	To health centre by moto, rent car and/or boat
Prepare baby accessories (12)	Towels, soap, baby mattress, blanket, pillow
Other (7)	Traditional medicine, animals to pay the TBA, cooking equipment for health centre, hammock, mosquito net

Although one of the birth preparedness messages was to have the phone number of the midwife, only one participant who was male declared he had this.

Source of information

Midwives and LDG’s were the main sources of information on birth preparedness.

Knowledge into practice

Barriers to transferring knowledge into practice included not having the money available to buy the clothes and accessories as well as traditional beliefs as stated by M3:

I have not prepared because in Phnong culture there is a warning that you should not prepare clothes, if I do the baby will not be delivered well and there will be danger to others and baby. (M3 Mondul Kiri, age 32, nine months pregnant, speaks Khmer but lives in a Phnong population, speaks some Phnong)

5.8. Danger signs for pregnant women

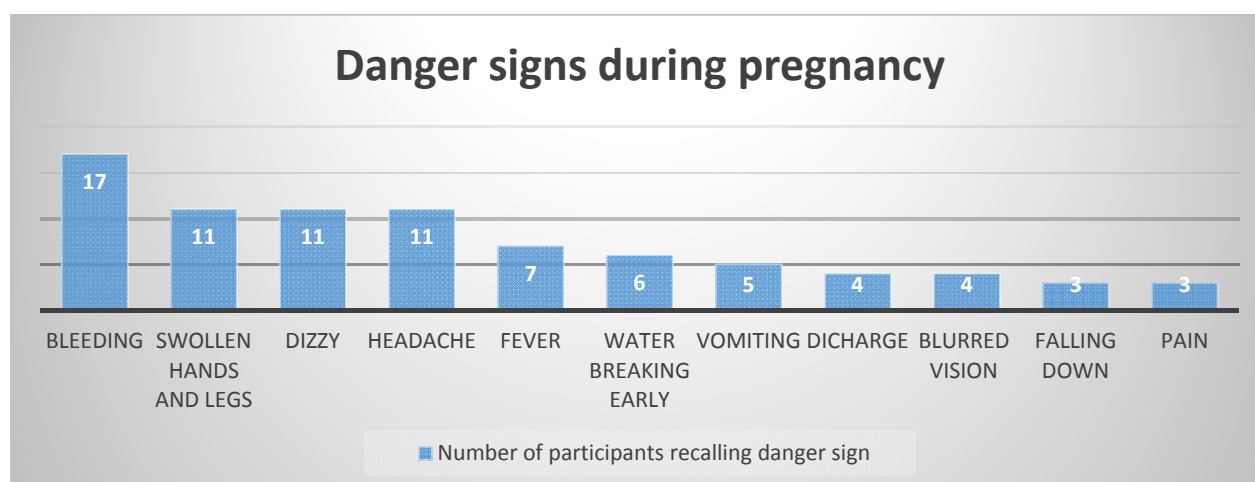
Danger signs recalled

A total of 21 danger signs were discussed during the interviews. Danger signs that were mentioned by three participants or more are shown in Figure 6 below, the most recalled danger signs were bleeding, swollen hands and legs, dizziness and headaches. Danger signs recalled by less than three participants included; Baby not moving (1), breathing difficulty (1), cool (1), cannot hear (1), no power (2), past due date (1), cannot eat (1), convulsions (1) and cannot sleep (1).

Danger signs not recalled

The danger signs of 'baby not moving', 'convulsions' and 'loss of consciousness' was not clearly remembered by participants and even with prompts of 'What may a woman feel or not feel during pregnancy when something was wrong?' did not elicit these danger signs. Low numbers of participants also recalled 'pain' and 'blurred vision' as a danger sign. Three participants said they couldn't remember any danger signs at all.

Figure 6: Danger signs during pregnancy



When participants were asked who they would ask for advice if they found a danger sign, the majority of participants mentioned the health centre or midwife or both. One said a VHSG and one said a relative. Therefore most participants are fully aware that a skilled professional is the best person to ask for advice.

During the participatory workshops most danger signs were recalled by the group leaders (VHSGs) however the following were recalled by one or less of the four workshops:

- Convulsions
- Lack of consciousness
- Pain
- Difficulty in breathing

This may indicate a need to refresh the knowledge of VHSG's around these danger signs and ensure that they are understood.

Source of information

When participants were asked where they heard about the danger signs their responses indicated several BCC intervention methods. Eight participants had heard from LDGs, two from the Village health promotion events, two from listening to the radio at home and two from MEDIA one staff. Nine participants learned from the midwife and from leaflets and posters from the Health centre. One participant explained she could not read the posters so asked the midwife what they said. Another participant who had never attended the health centre during her pregnancy said she heard about the danger signs from a neighbour. This is important when considering the wider spread of information through word of mouth. There were no differences between provinces other than Kratie and Stung Treng spoke more of receiving information from the midwife.

Knowledge into practice

A quarter of participants had experienced some danger signs during pregnancy including fever, headaches, swollen legs and the foetus stopped moving. Six of these went to the health centre and one spoke with a VHSG.

[I had] swollen hands and legs but I thought that's normal because I stand a lot [part of her job as beautician] The VHSG came to me and I had swollen legs so I went to the health centre. (S1, Stung Treng, age 21, baby one month old, Lao language)

5.9. Delivery and planned delivery

This section covers delivery experiences and delivery plans for those who were still pregnant. In addition, the length of time spent in a health facility postpartum is discussed.

Labour signs recalled

Labour signs identified by participants included: pain in the stomach, back and inside my body (12), water breaking (6), bleeding (2), needing to urinate or defecate (1) and swollen legs (1).

Source of information and reasons for choosing where to deliver

This section provides reasons given for delivering either at a health facility or at home. Although some participants recalled messages from the BCC interventions to deliver at a health facility, a number of factors influenced their decision such as perceived ease of delivery, advice from the midwife or family and transport arrangements. K6 delivered her baby at home, even though she had planned to have it at the health centre. She had spoken to the midwife earlier in her pregnancy and the midwife had said it was ok to have the baby at home:

[I] got pain and four hours later the baby was delivered. I stayed at home because the midwife told me it was ok to have the baby at home. I think it's better for women to have at the health centre, but because my baby was ok, she [the midwife] said its ok to deliver at home and its easier so no need to move. Next time I will deliver at the health centre because now it is near. (K6, Kratie, age 25, baby four and a half months old, Khmer language)

At the time of interview, a new health centre had been built on the island, which will potentially have a positive impact on delivery choice for that area.

When R3 was asked why she chose to have her baby at home she replied:

TBA is my relative, [pay] 20,000 Riel, chicken and jar of rice wine, doesn't matter expensive or cheap, it's easier to deliver baby so stay home...Not enough money

to go to the hospital and there were no dangerous signs so no need to go. (R3, Ratanak Kiri, age 34, baby six months old, Tompoun language)

Those that delivered at home were assisted by a TBA and/or by family members.

Some of the delivery experiences shared by the participants were challenging. Complications arose from waiting too long for their husbands to take them to the health centre which was often many hours after their water broke. For those that lived on islands the transport by motorbike and ferry posed risks due to the time it took and the discomfort of the ride. Once at the health centre, several women were referred to the hospital and travelled by ambulance or taxi organised by the midwives. The women explained that having an ID poor card meant they did not have to pay for the ambulance or taxi as the cost was covered by the hospital. Although health care costs were covered by those with an ID poor card, they were still required to buy food while in hospital, this additional cost was a concern for many and as a result they left the hospital early. K2 recalled her delivery experience:

I prepared for a specific ferry but I waited for my husband to join me which took two hours and that is why I ended up with difficulties and going to hospital...I went in labour, it was difficult because there was so much travel on motorbike and ferry and I had more pain and the birthing process had started. By the time I got there, there were difficulties so the health centre sent me to the hospital and then my waters broke and the baby came one hour later. There was no ambulance as the ambulance driver was drunk so I got a taxi and the hospital paid the taxi as I had a poor card. I stayed at the hospital for three days then requested to come home because the baby always cried and I didn't have enough money to buy food at the hospital so I needed to come home. (K2, Kratie, age 19, baby two months old, Khmer language)

Barriers such as transport difficulties, costs associated with being away from home and unequal treatment by health centre staff meant some women found it easier to deliver at home. Also if the labour was short or painful the women explained they would stay home to deliver even if they were aware that it was safer to deliver at the health centre.

Some of the women were not aware of the necessity to get to the health centre when experiencing labour pains or after their water broke. Those who had received delivery dates, relied on these as indicators for labour rather than the physical signs. R5 relied on her delivery date and did not go to the health centre until eight days after her water broke, by this time there were complications and she was referred to hospital.

My hands and legs were swollen and my water broke eight days before delivery. I planned to have the baby at the health centre but when my water broke I didn't go straight away 'cause the echo told me the baby would come later so I thought it still a long time before delivery date. (R5, Ratanak Kiri, age 30, baby eighteen days old, Jaray language)

However, the participants struggled to measure time and dates, eight days was an estimate by the participant that may have been inflated.

Five interviews were conducted with still-pregnant women, two with couples (pregnant wife) and two with husbands of women who were still pregnant. Over half of these participants stated they had plans to deliver the baby in a health facility. Reasons given were for safety, being unsure if the delivery would be easy or difficult, the health centre having better medical equipment and in Kratie, the TBA would no longer assist with the birth.

Four participants appeared unsure where they would deliver and that it depended on circumstances. Some women specified it would depend on how painful the labour was, if there was too much pain they would stay at home, if not they would be able to travel. Others felt if there were no

complications it would be safe to deliver at home. In the Tompoun community the social norm was to deliver at home which contradicted what they heard from the interventions and the younger participants would be more likely to follow their elder relatives who had delivered safely through a TBA.

I am not sure, if I have nothing serious I will deliver at home, if serious then I will go to the hospital. Its more normal to have the baby at home. The TBA will help me deliver.... Depends on my family decision, my parents and husband decide for me. If I was allowed to make the decision I would prefer to go to the hospital, they may agree with me. I don't know if I will stay home or go to hospital for delivery. The neighbours and family stay at home to deliver and the hospital is too far and it's too expensive to travel. (R2, Ratanak Kiri, age 18, eight months pregnant, Tompoun language)

Duration at health facility following birth

The duration of stay after delivery varied between one day and five days. Two participants asked to come home earlier than the midwife wanted because one felt better and one could not afford to purchase food at the hospital.

Knowledge into practice

Participants seemed well informed that it was safer to deliver in a health facility with skilled midwives and better equipment. Half the participants specifically mentioned these as reasons for choosing to deliver at a health facility. Some participants even expressed fear of delivering at home in case there was a problem. Half of the participants delivered at a health facility and over half of pregnant participants planned to deliver at a health facility. Three participants delivered at home and one pregnant participant planned to deliver at home. Four participants were unsure where they would be delivering and stated that this would depend on the circumstances. Table 9 shows a breakdown by province, there were no noticeable differences in delivery habits between participants in the four provinces.

Table 9: Delivery location by province

Delivery place/ Province	Mondul Kiri	Ratanak Kiri	Stung Treng	Kratie
Home	0	1	1	1
Health Centre	3	1	4	1
Hospital	0	1	0	2
Still pregnant	3	3	1	2

Case Study 4 Nhert Srob from Mondul Kiri



Nhert Srob was from Mondul Kiri, 26 years old, has a one-year-old child and was four months pregnant. She lived in the remote Keo Sema district and the nearest health facility was 30kilometers away on a very poor road. The quality of the road and distance meant that access to the health centre cost a lot in fuel. As a result, she did not use the health centre often. The last time she went was because she thought she had malaria but once there she found out she was actually pregnant. The midwife gave her iron tablets to take and she had two tablets left.

She explained she needed to take iron to protect her baby and prevent disabilities. She wanted to go to the health centre again and had asked her husband to take her. Unfortunately, they did not have the money to get there. Nhert Srob's last child was delivered at home by a traditional birth attendant (TBA). She is conflicted about where the best place was to deliver her next baby. She explained that the TBAs were telling women to deliver at the health centre as they have better equipment and she understood this. However, the TBA's payment process was easier for her. She could pay the TBA a live pig, some chickens and rice wine to deliver her baby. This was normal and easy for her as she had animals around her that she could give. Also, the more children you had, the cheaper it became. To deliver the second baby only a pig was required for payment and not a chicken. For her first baby she didn't know when the baby would arrive and so the animal payment was easier to get than petrol which takes money to buy. She wanted to have the second baby at the health centre though she didn't know if she would have the money then or not. She always had the animals to give to the TBA. However, she did have a plan to save money for the second baby. When she went to work on the farm she would try to earn enough and save 10,000 Riel, or else 5,000 Riel. Another deterrent for going to the health centre was the uncertainty of how she will be cared for.

[The] health centre is far away from here, I am afraid of the midwife and nurse because I am poor I feel they won't care for me like the people at home care for me. I heard bad stories from other people. When I went to the health centre there was a lot of patients but not much staff so cannot look after me.

Nhert Srob did not join the LDGs as she had to care for her baby and in her own words 'she was too lazy to go'. However, she did listen to the radio which was one of her main sources of information about RMNH. She had heard radio programmes in both Phnong and Khmer and specifically remembers the following messages from the radio:

*.... iron tablets for pregnancy to avoid disability, I can't remember any more!
Someone speaking as a drama.*

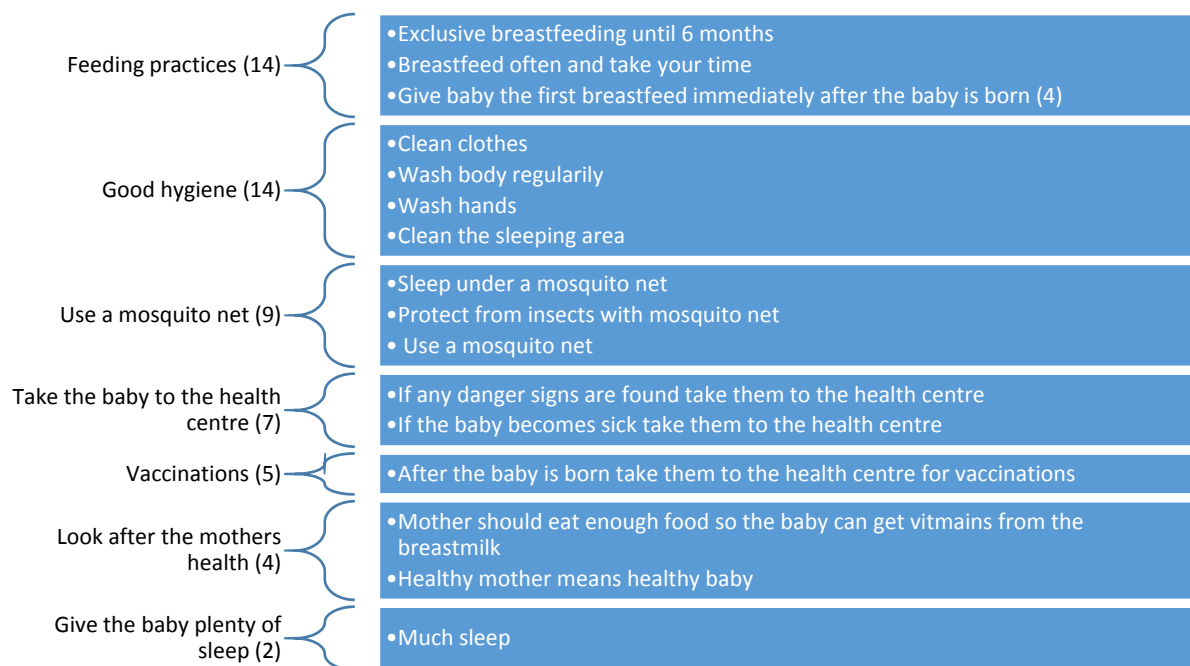
.... don't lift heavy things like carry water or cut the wood, don't cut anything high up, not allowed to drink or smoke

She also remembered hearing about contraceptives on the radio. She attended the Village health promotion event, but could not stay long because her child was crying and she returned home. The radio was convenient for her and a good way for her to receive RMNH messages. She said she mainly listens in the evening, around 7pm. Nhert Srob also recalled MEDIA One staff and CARE staff speaking in the village about danger signs for pregnant women and newborns. When asked 'who should a woman ask for advice if they find a danger sign?' she told us 'go to the health centre and ask the midwife'. However, it was evident from her story that there are many barriers for Nhert Srob to put this knowledge into practice.

5.10. Healthy newborn

All participants were asked: 'What are some things you should do to make sure your baby stays healthy?' Figure 7 shows the sub-themes that arose. They are presented in order of frequency with a summary of the comments.

Figure 7: Healthy baby suggestions



Two participants mentioned a yellow book given by midwives to track vaccinations. One participant commented that the midwife provided her with the book when she went to the health centre for the first time and the second participant listed 'having the book from the health centre' as a necessity to prepare for the newborn. Some participants said they didn't know what they should do to have a healthy newborn.

Sources of information

When participants were asked how they learned healthy baby practices, they gave the following as sources of information: health centre/midwife (3), other people/villagers (2), just know, no one taught me (2), learned from previous child(ren) (1), elder generation (1), TV (1), MEDIA One radio programme (1) and VHSG (1).

Cord Care

Cord care refers to the care of the umbilical cord stump on the newborn. Participants were asked 'Did/will you rub anything on the baby's cord?'. Nineteen participants out of 24 said they would not put anything on the cord other than something given to them by the midwife. The decision not to use traditional methods for cord care such as a beetles nests and ash came from; the midwives advice (9), no problem so no need to use anything (3), VHSG advice (2), CARE staff (1), LDG advice (1), TBA (1). Only one participant said she would use the traditional method:

I will put something on, the dust of the beetle and some tiger balm and also put tiger balm on the head. (M3 Mondul Kiri, age 32, nine months pregnant, speaks Khmer but lives in a Phnong population, speaks some Phnong)

5.11. Breastfeeding

All participants either planned to breastfeed exclusively or were currently breastfeeding exclusively. For participants that had babies over six months of age, some were introducing rice porridge into the baby's diet. Only one participant discussed the possibility of buying formula milk, but only if they did not produce enough breast milk.

Some participants highlighted the need to start breastfeeding as soon as possible, however the reasons for this were not discussed, only that the midwife has instructed to place the baby on the

chest and begin feeding immediately. One male participant shared how this practice differed from previous children:

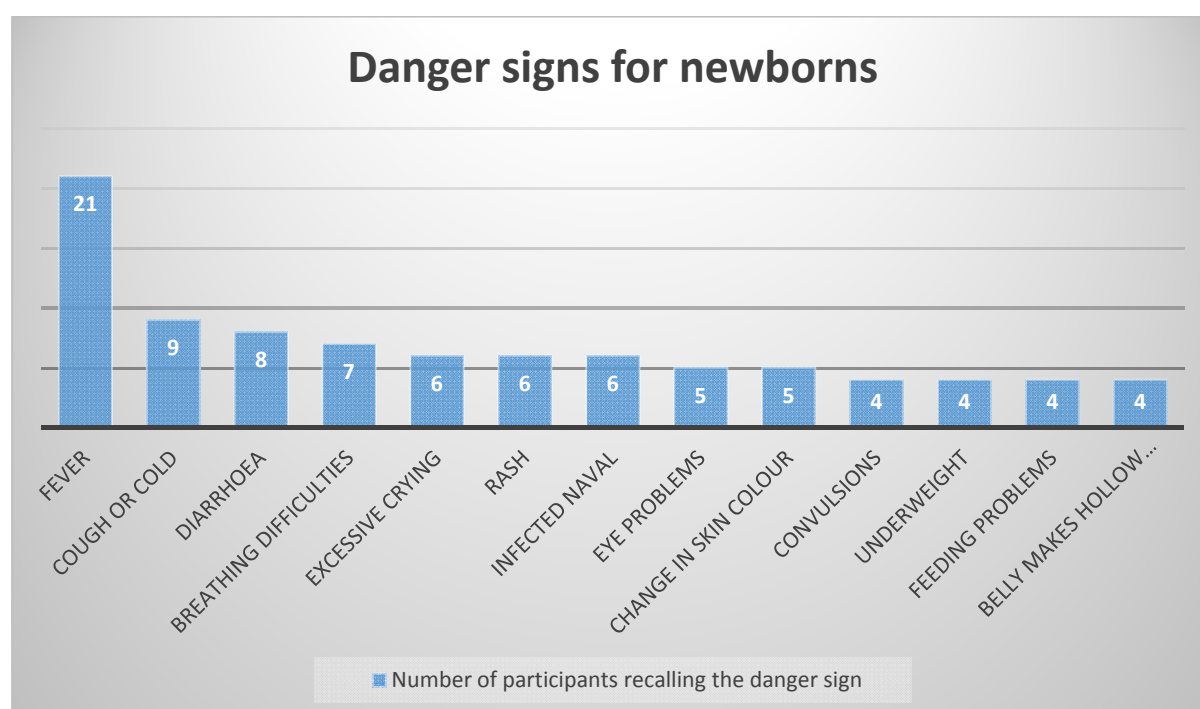
I have two children, they were not allowed to breastfeed for three days, [we thought] the first breastfeed not good for baby, but for this baby I will tell her [his wife] to do the first breastfeed. I will do this because the midwife told me so.
(R1, male participant, age 30, wife seven months pregnant, Tompoun)

5.12. Danger signs for the newborn

Danger signs recalled

A total of 20 danger signs were discussed during the interviews. Danger signs that were mentioned by four participants or more are shown in Figure 8 below, the most recalled danger sign was a fever. The next three were a cough or cold, diarrhoea and breathing difficulties. Danger signs recalled by less than three participants included; baby less active than normal (3), unusual sleeping patterns (2), vomiting (2), Chickenpox (1), pain (1), headache (1) and malaria (1). The 'changes in skin colour' danger sign included skin colours of; yellow (2), red (2) and one participant just stated a change in skin colour. 'Baby too hot' was included in the fever category and was recalled by two participants.

Figure 8: Danger signs for newborns



The intervention danger signs that were not recalled by participants included; yellow eyes, newborn temperature too cold and newborn bleeding. During the participatory workshops VHSGs were also asked to recall danger signs, the danger signs missed by the VHSGs were; vomiting, swollen stomach, pale skin, newborn not moving much and bleeding.

Similar to the danger signs for pregnant women that were not recalled by the LDG leaders, these signs may require additional training so they are not missed. However, due to the large number of possible danger signs, some may not have all been recalled without additional prompting. Prioritising danger signs which have more serious outcomes may increase chances of recall.

Sources of information

The main two sources for learning danger signs in newborns were the midwife (7) and the LDGs (two in Kratie, two in Stung Treng and two in Mondul Kiri recalled from the LDGs). Ratanak Kiri made no

reference to learning newborn danger signs from any of the interventions, only from the midwife and other community members. Others included: seeing children with that danger sign (3), VHSG (2), TV (2) MEDIA One radio programme (1), NGO staff (2), watching their mother with siblings (1) and school (1).

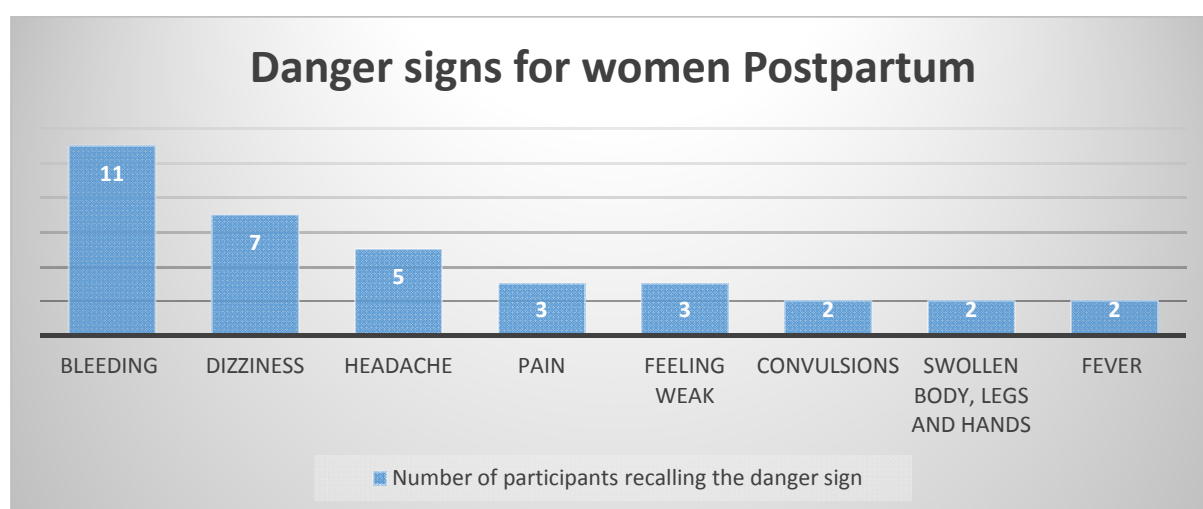
Knowledge into practice

Eight participants had experienced a danger sign and all had taken the newborns to the health centre. Unfortunately, after convulsions one participant's baby died in hospital.

5.13. Postpartum danger signs for women

A total of 14 danger signs were discussed during the interviews. Danger signs that were mentioned by two participants or more are shown in the chart below. The most commonly recalled postpartum danger sign was bleeding for too long or too much. The next three most recalled danger signs were a cough or cold, diarrhoea and breathing difficulties. Danger signs recalled by only one participant each included: blurred vision, diarrhoea, eating problems, becoming unconscious, getting a cold and having tetanus fever.

Figure 9: Danger signs for women post-delivery



Participants found it difficult to recall danger signs for women postpartum. After listing bleeding and dizziness, very few participants could name more, even with additional prompting. The danger sign, 'bleeding with bad smell,' was not recalled by any of the participants.

Danger signs for postpartum women less recalled by LDG leaders

During the participatory workshops the VHSG's/LDG leaders only recalled two postpartum danger signs: bleeding and pain. This could be an area of weakness that would benefit from additional training and learning resources.

Sources of information

Few participants recalled where they had learned the information, however two stated they heard about danger signs at the LDG's.

5.14. Roasting

Photograph 2: Example of 'Roasting' procedure



The practice of roasting begins once a woman returns home following delivery of the newborn. It is a traditional practice that spans across Cambodia. Roasting involves lighting a small fire beside or under the woman's sleeping area. She lies on top or in front of the fire for a period of time, either during the day or during the night or both. A total of 17 out of 24 women said they would practice roasting after delivery or had practiced roasting already. Five participants said they would not or had not practiced roasting due to advice from the midwife.

Frequency of roasting included, three days (Kratie and Mondul Kiri), five days (Stung Treng), eight nights (Ratanak Kiri), 10 days (Ratanak Kiri), and one month (Kratie and Mondul Kiri). Three participants said they

practiced roasting because the elder generation and families told them to. Four participants said it was to dry their blood vessels and two participants said it was to keep warm. One participant specified a need to roast in order to return to work quickly:

I will do roasting because I am a farmer and need to work hard, I need to roast to make my blood vessels hard again, to dry inside. (K3, Kratie, age 28, eight months pregnant, Khmer language)

In one case roasting had caused health issues for the woman:

On the nineteenth day [after delivery] I went back [to the health centre] because I was sick. The midwife told me because I was roasting it made me too hot and made me sick. (M4, Mondul Kiri, age 31, baby four months old, Phnong language)

5.15. Postnatal care

The term postnatal care/check was not familiar so participants were asked 'Did you go to the health facility again after the baby was born?'. Most participants replied that they only went to the health centre to get vaccinations for their newborn. An additional question of 'Was your health checked while you were there?' was applied. The responses varied; nearly half of participants went to a health centre only for the newborn vaccinations or because the newborn had a health issue. Few women had their health checked after the baby was born and there was no differences between provinces. However, for the women that delivered in a health facility and stayed at the facility for two days or more, their health may have been checked while in care. The concept and understanding of why women should go to the health centre after the baby is born is not fully understood, their visits to the health centre are reactive to a health issue or for vaccinations but not seen as part of the overall process of good health for the mother and newborn. None of the participants recalled PNC from any of the interventions and there were no differences between provinces.

5.16. Birth spacing

Awareness of contraceptive methods

Twenty-three participants were aware of modern contraceptive methods. One participant was not asked about contraception due to the presence of many males who would not leave during the

interview. Figure 10 shows the contraceptive methods recalled and the number of participants who named that method.

Figure 10: Birth Spacing methods recalled by participants



Challenges

The participants were asked ‘Are there any challenges to accessing or using birth spacing?’. There was a distinct difference between the views of female and male participants. Men compared to women expressed more misconceptions of perceived side effects and fears of using contraceptives. Fears included poor health such as headaches, dizziness, diarrhoea, putting on or losing weight, difficulties in becoming pregnant after stopping contraceptive use and the baby being affected through drinking breastmilk.

M5’s wife had used the injection in the past but he feels if she takes it again she will not produce breast milk for the baby:

After the baby is born we will use the calendar method, I don’t know why, I decide this by myself. I am afraid if she takes medical method she will not produce the breast milk. I heard this from another person in the village. (M5, Mondul Kiri male, age 27, wife nine months pregnant, Phnong language)

R6 fears his wife may not be able to become pregnant again:

She [my wife] doesn’t use [contraceptives] now, I think that if my wife uses it [contraceptives] she won’t become pregnant again. (R6, Ratanak Kiri, age 23, baby nine months old, TOMPOUN language)

Views by women were more positive and focused on the need to have less children and choosing the method most suited to them. Misconceptions that did arise from women were few and included; an IUD would make it difficult to work hard and that generally contraceptives would make the mother or the baby hot or have a fever. One female participant also feared she would lose weight.

Sources of information

When participants were asked where they heard about birth spacing their responses indicated that the majority of participants (14) heard from the health centre of midwife. Nearly all participants from Kratie and Stung Treng said the midwife informed them about contraceptives. In addition, several BCC intervention methods were listed, four participants had heard from LDG’s (one from each province), two from the VHSG (both from Kratie), one from the Village health promotion events (Kratie), one from listening to the radio at home (Mondul Kiri), and one from CARE staff. In addition, two participants heard from neighbours or relatives and one from the TV.

Knowledge into practice

There is a willingness to use birth spacing methods. However, the recommended time length between giving birth and taking contraceptives of one and a half months is not understood as well. Of those who were currently using contraceptives only one took the contraceptive at the recommended time after giving birth. The others ranged from two and half to six months postpartum. Participants who had already delivered but had not yet started using contraceptives stated they would wait until between two and nine months before beginning use.

I use tablets now. I used [contraceptives] about one and a half months ago, I followed the radio show. When they [radio show actors] use the tablet they can take time to have another baby and earn some money. (M4, Mondul Kiri, age 31, baby four months old, Phnong language)

We used an implant before this baby. I do not use anything now. I will start using but don't know when. We feel we have enough children so don't want more. I am not using any now, because I had no period yet, I cannot start it. The health centre told me no starting until my period. I know about traditional methods, but don't use it because I don't trust it. I get the birth spacing from the health centre. I Buy a ticket for three thousand Riel and rest is free. (K1, couple interview, Kratie, age 28, baby two months old, Khmer language)

I plan to use the birth spacing, but not until eight or nine months. I think my baby would get a fever, the tablet is hot and I may become thin. (K6, Kratie, age 25, Kampong Krabei Island, baby four and a half months old, Khmer)

M3 was using birth spacing when she became pregnant, her story is found in Case Study 5 below.

During the Kratie participatory workshop the midwife said that many more women are using birth spacing since Marie Stopes gave financing for contraceptives.

Case Study 5 M3 from Mondul Kiri

M3 was nine months pregnant and already had five children. She decided that she did not want any more children and so chose the injection as a birth spacing method. However, she stated the injection did not work. She was aware that she must renew it every three months and said that she had gone back regularly. M3 explained that her husband left her, but when he had been drinking he often comes back to her for intercourse and sometimes beats her. It was on one of these occasions she became pregnant. When the interview began, M3 described a recent encounter with her husband:

My pregnancy has been ok until last month since my husband hit me. I am dizzy and weak and I don't have enough food, because there is not enough money, my sons cannot earn enough money yet, as they are only fifteen years old. My husband lives with someone else. My husband and new wife always come to hit me... and I have lived alone for ten years.

My eyes cannot see clear, my husband hit me and hurt my eyes. My husband beat me and hurt my stomach and now I have pain... I have been to health centre two times since I had the pain. The midwife said the baby is weak, they gave me iron and some IV while I was there. I had to come back as I had no one to look after the children at home... An NGO said they will give me money to go to health centre to get it checked but it's [the money] from the province and I must wait for my son to earn the money to go.

M3 was not aware she was pregnant until she felt the baby move. She was not having regular periods due to the use of the contraceptive injection and so she could not tell she was pregnant by missing her menstrual cycle. M3 lives in a remote area which is 30kilometers from a health facility and she was six months pregnant when she first went to a health facility. Her last child was delivered at home but she intends to deliver this time at the health centre as the baby is weak. However, she said that if she is in too much pain she will deliver at home. M3 had attended the Village health promotion events and took part in the quiz where she won a radio for her knowledge of RMNH information. She listened to the radio regularly in the morning around 11am and in the evening to the local Mondul Kiri channel. Her husband was from the Phnong community so although she is Khmer she had become part of the Phnong community when she moved to Mondul Kiri. She

understood very little of the Phnong language. She has heard the MEDIA One radio show in Phnong but could not understand it so she waited for the Khmer version. She said that she now eats better food and sleeps more as a result of the information she has learned. M3 has also been to the LDGs twice. She spoke of the importance of giving the first breastmilk to the baby immediately after birth and that a pregnant woman should not smoke. However, M3 does still drink alcohol; she states she has not heard that this is a problem when pregnant and she also plans to use traditional methods of healing the babies cord by using beetle's nests. The BCC interventions in her community are delivered in Phnong, which is a barrier to M3's understanding of RMNH information. M3 is a vulnerable woman with high risks to her own and newborns health. The health centre is far away and difficult for her to reach. For women like M3 there is greater need for these BCC interventions to be understood and followed.

5.17. Abortion

Twelve Participants (six from Kratie, four from Stung Treng and two from Mondul Kiri) were asked about their views, understanding and experience of abortion in Cambodia. Ratanak Kiri and Mondul Kiri interventions did not cover the topic of abortion.

Half of participants were aware that you could have an abortion at the health centre and four participants thought you could not. The K4 interview was with a married couple who were aware that it was dangerous to have an abortion outside of professional health care. However, their opinion was that a lot of abortions did occur outside of health facilities due to the lateness in their pregnancy.

[Abortion is] very dangerous if you don't discuss with the doctor...Just take the tablet and the baby comes out, but if you keep working hard you will bleed too much and its dangerous. Sometimes it doesn't work and then you get a lot of pain ...I saw someone have this problem in the village, they went to the health centre after anyway. There is a lot of abortions in the community and village because the health centre won't accept them because the baby is too big. (K4, Kratie, couple interview, five and a half months pregnant, Khmer language)

There was some confusion between what is legal and what is not. There may have been some translation issues as to the understanding of the word legal, although this was discussed with research assistants they felt they were explaining the terms correctly. Those that were aware it was possible to have an abortion in a health facility still felt it was illegal.

Illegal because it kills the baby and it [the baby] doesn't know anything. It's also dangerous for your health and the baby, sometimes [the baby] doesn't come out all at once and some is left causing danger for the woman. If the woman does it herself its dangerous but at the health centre it is ok. If they do by themselves, they take a tablet. (K3, Kratie, age 28, eight months pregnant, Khmer language)

S1 also expressed fear that the removal of the foetus was not always complete and it could cause the women to become unwell. One participant said it was only legal if the health centre had a license. K5 and M1 thought it was illegal and could not be done in a health centre:

[Abortion] is illegal. Cannot have at the health centre because it is illegal and they can help delivery only. (K5, Kratie, age 23, baby three months old, Khmer language)

[Abortion] it's not good, because it kills the baby and makes the mother sick. I never heard that this can be done in a health centre before and that it could be safe. (M1, Mondul Kiri, age 17, baby four and a half months old, Phnong Language)

When asked where they heard about abortion, two participants said they were just guessing and one participant from Kratie said from the VHSG, radio and LDG. Four of the six participants from

Kratie knew that abortions could take place in a health centre.

5.18. Decision makers

Most participants mentioned some involvement from their husbands in the pregnancy process. The most cited activity was to take their wives to the health centre for ANC and for delivery. Most female participants were the decision makers for when they should go to the health centre but the decision to deliver at the health centre was influenced by husbands, family and social norms. Over half the participants spoke about their husbands taking them to the health centre for ANC or delivery. Eleven participant's husbands took on the responsibility of cooking and carrying the water from the well during and after their wife's pregnancy. Eight participant's husbands took on the role of washing clothes, five stated they wouldn't let their wives carry anything heavy and five would cut the wood for the fire.

Parents, VHSG's, midwives and neighbours also influenced women on RMNH behaviours. Rev Nang (Case Study 1, page 18) told how her husband and parents were the dominating decision makers when deciding to go to the health centre or not. Her mother is a TBA and delivered her last child before this one.

R2 spoke of key decision makers when trying to decide where to deliver her baby:

Depends on my family decision, my parents and husband decide for me. If I was allowed to make the decision I would prefer to go to the hospital, they may agree with me. I don't know if I will stay home or go to hospital for delivery. The neighbours and family stay at home to deliver and the hospital is too far and it's too expensive to travel. (R2, Ratanak Kiri, age 18, eight months pregnant, Tompoun language)

Elders had a significant influence on women with regards to traditional beliefs and behaviours. They provided knowledge of traditional medicine, roasting, cord care and delivery in the home. This generation should be a key stakeholder when implementing BCC interventions for RMNH.

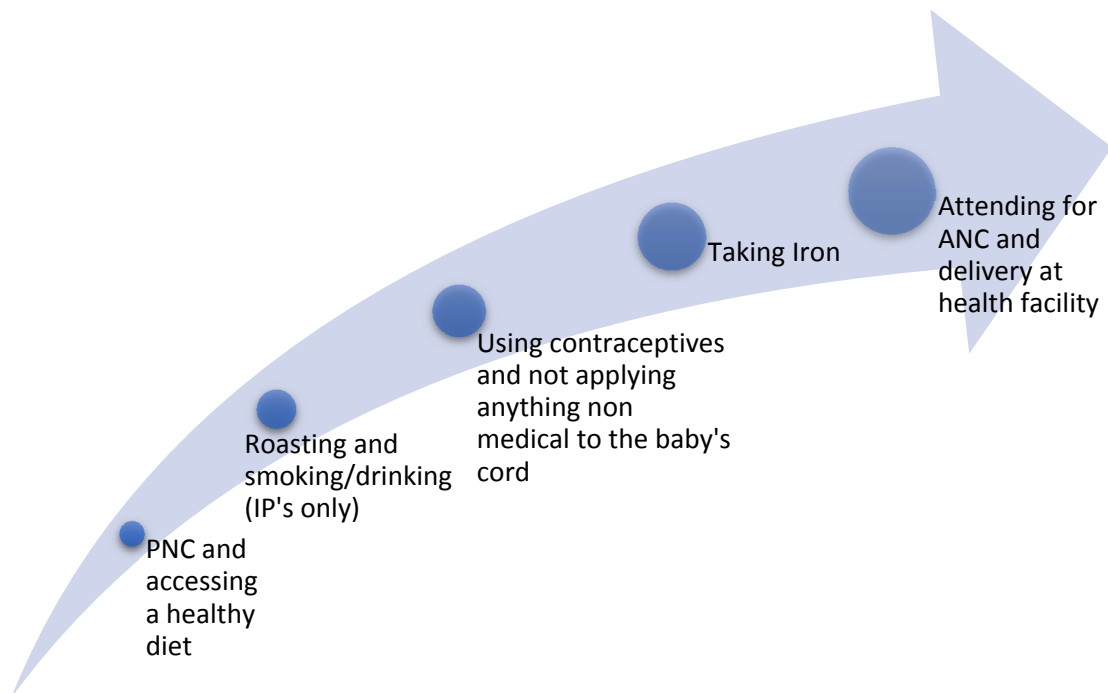
5.19. Most and least significant changes

Most significant change

As part of the participatory workshops, VHSG's, health professionals and MEDIA One were asked what they thought was the most significant and least significant change as a result of the BCC interventions. This information was compared with data from the interviews and

Figure 11 depicts the perceived most and least changes in behaviour of community members residing in the target districts within the four provinces.

Figure 11: Least to most significant changes as a result of BCC interventions in target areas.



All five workshops felt that more women were coming to the health centre for ANC and to deliver their newborn as a result of the BCC interventions. Following this, Mondul Kiri, Stung Treng and MEDIA One felt women were also taking iron more regularly. This was confirmed in the interviews. Following this MEDIA One and the interviews confirmed that the awareness levels of contraceptives was high with nearly all participants being able to list modern contraceptive methods. Nineteen participants did not put anything on the baby's cord. There was evidence that for previous pregnancies women would use a beetle's nest on the baby's cord but following advice from the communication methods and the midwife, stopped this practice.

When participants made comparisons between their most recent pregnancy and previous pregnancies the behaviour changes discussed matched those in

Figure 11, with the additional change of giving the first breastmilk following birth to the baby.

This evaluation shows that women are making contact with health professionals and are aware of the necessity to do so. This is the main behaviour change identified in this research. This also has a wider impact on the other messages that are being communicated as part of this campaign. Once the women are at the health centre they are receiving advice and guidance which further backs up the messages they may have heard via the LDGs, radio broadcasts and SMS/voice messages. Many of the participants identified the health centre as a main source of information and could remember what they had been told.

Regarding the other end of the spectrum of least significant change, results differed by province. Ratanak Kiri and Mondul Kiri participatory workshops thought that the use of traditional medicine and smoking and drinking was still a problem in IP communities. The interview data however did not match this view. For instance, smoking was identified by the Mondul Kiri workshop as being the least significant change, however the interview data found more smoking in Ratanak Kiri than in Mondul Kiri and other than one female participant, no one said they drank alcohol. Ratanak Kiri participatory workshop identified the use of traditional medicine as an ongoing problem, interview data found that it was used by some but not the majority and this was not specific to a particular province. Kratie, Stung Treng and MEDIA One all highlighted that achieving a healthy diet was not likely due to a lack of understanding of food groups, money to buy foods and availability of specific foods.

MEDIA One identified PNC as the least significant change by community members as a result of the BCC interventions and interview data confirmed this.

Project improvements suggested by the participatory workshops

- Add men's groups in Stung Treng (men's groups were not mentioned as an improvement in Kratie)
- TV/DVD to add to communication methods to show at Village health promotion events.
- Radio channels and broadcast times to be altered to suit listeners.
- Increased meetings between MEDIA One and group leaders.
- More printed promotional material using pictorial instructions and to display them in key places around target areas. (although one midwife felt these did not work, VHSG's found them useful)
- Increase the number of voice messages and select a good time to send and receive.
- Increase frequency and length of radio broadcasts in Mondul Kiri and Ratanak Kiri.
- Use a loud speaker as a communication method.
- Engage local leaders such as Village Chiefs, School Teachers and Monks to raise awareness of RMNH communication channels.

6. Discussion: Communication Methods

6.1. BCC intervention methods

The communication methods that were successful in gaining exposure varied by province. Attendance at the LDGs was the most common and popular method of receiving messages. All four provinces displayed evidence that there was a positive link between attendance at LDGs and improved knowledge, attitude and practice. The method of listening to the radio in a group formation with an educated leader and a chance to ask questions worked well. In addition, the radio broadcasts in the LDGs continued to improve the knowledge of VHSGs, VSLAs and CBDs who then took the information further into the communities. Previous research has shown that development for community health workers like the VHSGs, is often only delivered as a one-off initial training and is not followed by additional training or refresher courses, compromising programme success (World Health Organisation *et al.* 2015). By having pre-recorded creative dramas and call in shows, where

VHSGs could also ask questions, they are able to continually increase their knowledge. This in turn increases the prospects for longer term sustainability.

The LDGs not only created dialogue in the communities but the interviewees demonstrated a sense of empowerment from having an increased knowledge and confidence of RMNH practices. The women spoke with passion, pride and enthusiasm about how they shared the information they learned with others in their communities. They became active educators and with further encouragement had the potential to increase the social diffusion of the messages. Some women actively showed their babies to the researchers and surrounding audience to demonstrate the effect of iron tablets by pinching 'chubby legs' and exclaiming how strong and healthy their baby was in contrast to others. A simple recognition of their knowledge and activity as a champion, following a positive deviance model would inspire further sharing of information and behaviour change in the community (Schooley and Morales 2007). Media programmes should not only seek to have a direct route of effect from exposure to the message but also through social diffusion like inter-personal discussion (Popova 2016). Such enthusiasm should be embraced and grown.

Radio broadcasts depended on the LDGs for exposure in Kratie and Stung Treng where radio ownership was nil. Radio broadcasts, independent of the LDGs, are more likely to be received by the intended audience in the IP populations within Mondul Kiri and Ratanak Kiri where there was more of a radio following. For these two provinces the use of a radio broadcast is worth investing in. However better understanding of listening habits such as time and place as well as the channels used would enhance the chances of the broadcast being heard. Also as the drama broadcasts were only played once a month, there is a risk that listeners would forget the time of broadcast as well as what happened in the drama. If the broadcasts were played closer together this may create a desire to follow the programme more often, thereby increasing listenership.

All communication methods associated with the use of a phone such as IVR, voice, or text messages depended on the ownership of a phone as well as the knowledge and confidence of using the phone. In Stung Treng and Kratie, eight participants out of 12 had access to a phone. Conversely, in Ratanak Kiri only one out of six participants had access to a phone. Overall it was felt by the group leaders that the phones were a good way to communicate with men, but not necessarily women. However, this may be an assumption that is more historically based as over half of the participants interviewed for the research either had their own phone or shared a phone. Access to mobile technology tends to increase and future projects may find that women are gaining access to a phone. The mechanisms to gaining phone numbers must be established in order to ensure women or men are receiving the messages. Only five out of a possible 12 participants received a message.

The BCC interventions lacked support from health centre staff, such as midwives, who do not have a strong understanding of the LDG's and radio broadcasts, and so were not as active as they could have been in referring women to the groups. The posters and leaflets would help to some extent; however, a lot of the participants could not read which poses further problems to understanding messages. The strong influence of the midwife on participant's behaviour was a recurring theme throughout the interviews and hence, the importance of women accessing the health centre where messages from the BCC interventions will be reinforced. Midwives should be a key stakeholder and promoter in future BCC interventions and be fully versed in the activities in their area. Repeated exposure to a message by a variety of sources may communicate an implicit social expectation about a behaviour (Hornick 2002, Fishbein and Yzer 2003). If the midwives verbally advertised the radio broadcast to the women during this initial appointment they may have been more likely to listen. However, dedication from the VHSGs, who visited women in their homes, meant that communities were well informed about the LDGs and that the BCC messages even reached women in their homes.

6.2. Other possible communication improvements

Family members, particularly mothers and older generations of pregnant women and their husbands, have a key role in decision making, especially for new first time mothers. Communication

campaigns which include family members and engage with elders as well as the husbands may have more effect in achieving behaviour change. Young women from IPs are specifically relying on support from their elder relatives in the community and have shown that they will follow their advice before that of a midwife. The early age in which women from IPs can get married, and subsequently pregnant, makes them a vulnerable group. The RMNH messages for young women from IPs did not seem to resonate as well as they did with more mature, confident women or women from Khmer origins. As was shown in the results section, one young woman was apprehensive or embarrassed when engaging with health providers. During the interviews young IP women were cautious and embarrassed to talk about female issues such as contraceptive use and even reluctant to speak about missing a period. Future campaigns would benefit from undertaking research with this young group of women to understand what messages would better align with their environmental context and life stage. When trying to change behaviour in IPs it is not simply a matter of communicating in a local language but about understanding their beliefs, lifestyles and traditions. The age of reproduction was one of the main differences between IPs and Khmer women. Another was religion; Khmer women were Buddhist, whilst some IPs were Animists. These differences could have an impact on message interpretation, meaning and application.

The communication methods used in Stung Treng were delivered in the Khmer language, but two of the participants spoke Lao as a first language and other possible participants could not be interviewed due to the language gap. This may not be the case in all of Stung Treng but when targeting specific districts, it's important to understand the language and cultural differences of Lao speaking populations. There is a belief by Khmer speakers that Lao speakers can also speak Khmer, but this is a myth; interviewees were confused by Khmer words which limited communication in interviews and will have limited understanding of campaign messages. This corresponded with the focus group completed by MEDIA One where one participant responded that the radio broadcast language would be better in Lao so she could understand.

7. Discussion: Behaviour Change

7.1. Initial engagement with health providers and antenatal care

The LDGs and radio broadcasts successfully communicated the importance of going to a health centre following a missed menstrual cycle. The majority of participants attended the health centre for a pregnancy test within the first trimester. This is one of the most important behaviour changes as women will have early contact with a skilled birth attendant where she can access emergency phone numbers, blood tests, iron supplements, health advice and be known to the health centre. Even if transport difficulties or the rainy season prevent further visits to the health centre at least they will be known by VHSOs who can offer further support. Outreach services from the health centre will also have an improved chance to identify them in their communities once they are known. While there are some challenges to attending the health centre, the majority of women were determined enough and managed to overcome them. This will have a positive long term impact on their pregnancy and newborn.

In some cases, financial restraints, dependency on family members for transport and working away in the farms meant that the women could not access health care as frequently as recommended and sometimes not at all. They were aware of the need to go to the health centre but these circumstances prevented them transferring their knowledge into practice. Stronger links with services such as the VSLAs or outreach services may help with these barriers.

MEDIA One conducted a baseline focus group in Kratie and Stung Treng before the interventions began and found that most of the women were aware that they should have regular checks at the health centre. However, it is not known if this was being translated into practice. There is evidence from the interviews here that women had changed behaviour in comparison to previous pregnancies. Some participants mentioned that in previous pregnancies they attended the health

centre less or even not at all. Just under half of the participants specifically heard this message from the LDGs or from the radio broadcasts at home. This does suggest that an actual behaviour change as a result of the LDGs and radio broadcasts has taken place. In addition, behaviour change theories highlight that repeated exposure to messages could be the difference between knowledge and practice (Hornick 2002). There is evidence here that dialogue has been created in the communities through repeated exposure to messages via the communication channels and more importantly through social diffusion. The women that attended the LDGs shared their knowledge with neighbours and family members. Discussions that took place in the communities as a result of the interventions would have reinforced the messages and are possibly creating new social norms.

7.2. Healthy and unhealthy pregnancy messages

The participants were knowledgeable about having a healthy pregnancy: they knew to take rest, not to work too hard and what food to eat. These messages were also spoken of during the MEDIA One focus groups at baseline. Therefore, it is not possible to measure if this knowledge was increased following the interventions or if this was prior common knowledge. However, having good hygiene and avoiding conflict in the home featured in the interviews for this research and did not come up during the MEDIA One baseline findings, showing some increase of knowledge around healthy pregnancy topics.

The results highlighted a number of barriers when trying to follow healthy pregnancy advice. From the interviews here and from the MEDIA One focus group there was evidence suggesting that although food requirements were understood, eating habits didn't always change. Challenges associated with gaining nutritious food such as location and cost made behaviour change difficult. Similarly, the work ethic meant that women worked when work was available regardless of their pregnancy status. The necessity to earn money won out over the knowledge that working too hard was a risk to mother and unborn baby. This was further reinforced by the elder generation who felt it was important to work hard, if the mother showed strength the baby would too. Furthermore, the interviews highlighted that women working in the fields were less likely to attend at health services and LDGs. The women who leave home to live and work on the farms are currently missed by the BCC interventions. Further research identifying working behaviours, and social structures required to support rural working women during pregnancy is required. A harm reduction approach of working lighter may have resulted in a better outcome, ad hoc conversations discussed the possibility of pregnant women doing lighter duties, these could be identified and promoted. In contrast, hard work in the home such as chopping wood, fetching water and washing clothes was taken on by the husband in a number of cases. This demonstrates understanding by both husband and wife and a willingness to reduce the risk of hard work while in the home.

The advice to 'not travel far' by moto is also difficult for women who live far away from health centres on poor roads. This advice can be contradictory and should be made clear as to when it is ok to travel far, such as to go for an ANC appointment at a health centre.

Only one woman mentioned stopping smoking and that was following the birth of the baby, there was no other evidence that women stopped smoking due to the information they received about the dangers to the baby. The women who smoked continued to smoke during pregnancy and this was particularly prevalent in Ratanak Kiri. As smoking is an addiction, short term education is not sufficient to achieve behaviour change. Smoking in Ratanak Kiri females begins as young as eight years old and must be addressed as a wider public health issue within this IP. However, initial awareness raising through the communication methods will create the platform for further anti-tobacco campaigns. Only one woman drank alcohol and although she suggested that if she knew that it was bad for her pregnancy she would have stopped, when she was informed after the interview by the VHSG, she did not indicate a desire to stop.

The strongest healthy pregnancy message received and acted upon was to take iron supplements. MEDIA One's focus group at baseline found that less than half the women in the focus groups

understood the reason for taking iron supplements. The participants here understood the benefits of taking the iron, particularly with regards to their baby's future health (see Case Study 3). These messages mainly came through the midwife, LDGs and the radio broadcasts. However, barriers to accessing a health centre are also the barriers to accessing iron. Participants who accessed the health centre or had midwife outreach took iron; those who could not were unable to. The majority of women also took them as instructed unless they felt nauseous. One participant shared a cure for this was to eat a sour fruit which she said she had learned from the LDGs.

The use of traditional medicine was on the decline and the advice from the midwife to postpartum women to not drink rice wine was being followed by most participants. Those that were using rice wine post-delivery were using small amounts and the level of risk involved with this behaviour should be considered further.

7.3. Birth preparedness

The baseline MEDIA One focus groups identified that less than half of the female participants had prepared anything for the birth of the baby. In contrast, this is a strong area of recall amongst the interviews in this research. The majority of participants were aware that they needed to prepare clothes and equipment for mother and baby, transport to the health centre and money for the birth. However, only one participant made reference to having contact with the midwife by telephone or arranging with the health centre to give birth. This should be an area for further promotion in BCC interventions. There is a possibility that these arrangements were done during health checks. There were minimal barriers to preparing for the birth, other than having the finances to buy goods, and most of the women had made preparations.

7.4. Danger signs during pregnancy, postpartum, and for the newborn

Participants were able to recall a number of danger signs during pregnancy. The baseline focus groups from MEDIA One also found similar danger signs as recalled here indicating that there has not been a development of knowledge from before to after the intervention. In addition, key messages such as the 'baby not moving', 'convulsions' and 'loss of consciousness' were not recalled before or after the interventions. Similarly, for newborn danger signs, 'bleeding', 'yellow eye' and 'baby feeling cold' were not recalled. Identification of postpartum danger signs was also poor. These important messages should be a focus for future media interventions. The recollection of danger signs by LDG leaders (VHSG's) also needs strengthening in order for them to reinforce the messages when they hold meetings or visit women's homes. Generally, recollection was not good but those that recalled danger signs attributed this to the LDGs, radio, village health promotion events and voice messages. Participants who had experienced danger signs during their pregnancy or from their newborn had gone to the health centre to seek advice and one had asked a VHSG, indicating that knowledge was transferred into practice.

7.5. Delivery

The women in both the MEDIA One focus group before the intervention and during the interviews here identified that it was safer to deliver at the health facility. The focus group by MEDIA One identified that before the interventions women were aware that they should deliver at a health facility but were unsure of the risks associated with delivering at home. The research here demonstrated that women were aware that TBAs did not have the skills or equipment required for a safe delivery and in one case a participant's mother, a TBA, was actively referring women to the health centre. She had also attended the LDGs. In practice, the majority of women had delivered at a health facility, demonstrating a trend towards delivery with a skilled birth attendant. However, three participants delivered at home and one planned to deliver at home. Three others were unsure where they would deliver and would be reactive in their decision rather than proactive. Reasons given were the location of the health centre, cost of getting there, lack of care by health staff and an overall perception that if there were no complications it was easier to stay at home and therefore

not attend at a health centre. In some cases, there were risks to the mother and baby by travelling far by ferry and by moto, especially during the rainy season when there are high winds. There was no discussion about the use of waiting rooms by any of the participants. This may be a gap in campaign messaging and one which could potentially reduce the risk caused by adverse weather conditions and modes of travel.

Following birth, the length of time spent at a health facility varied between one and five days with only six participants staying for more than two days. Some women wanted to return home early as they could not afford to buy food away from home or because they felt well enough to return.

7.6. PNC

The need to have PNC was not understood by the majority of participants and should be a focus for future campaigns. Women felt as long as they were well and there were no danger signs with their newborn, there was no need to return to the health facility. However, they did take their newborns to be vaccinated. This could have been a chance to check the health of the mother and baby. When asked if women had their health checked at the time of vaccinating their baby the majority said they had not. Work with health centres to integrate PNC during early vaccination visits may improve the situation.

7.7. Newborn Care

The participants listed several methods to keep their newborn healthy, but when asked where they learned this information the BCC interventions were not named. They reported knowing this information from the health centre, neighbours, relatives and other sources. However, as the BCC interventions resulted in women going to health centres when previously they had not, they indirectly improved knowledge of newborn care through linking women with health professionals.

The majority of participants did not practice traditional methods of healing the newborns cord such as using beetle's nests and instead followed the advice of the midwife and LDGs to use clean water or items from the midwife. Three participants said they learned this from the LDGs and had actively shared this information with the community. This behaviour change was also verbalised when asking about differences between previous children and the current newborn.

Breastfeeding was practiced, or a planned practice, by all participants and some participants referred to the importance of the baby receiving the first feeding immediately after delivery, a practice they had learned from the BCC interventions.

7.8. Roasting

There was evidence from the interviews that practicing roasting was on the decline, but the majority of participants still practiced or planned to roast regardless of campaign messages and advice from the midwife. This behaviour is engrained within cultural tradition and is promoted by the elder community. The risks from practising roasting vary depending on how the fire is made (underneath or beside), when the woman lies near it (night/day or both) and for how long. Risks of dehydration and swelling were mentioned by one participant who then had to attend at the health centre. Future messages may suggest methods of 'healthy roasting' such as reduced exposure time, proximity to the heat and hydration messages to reduce risk.

7.9. Birth spacing

Awareness of modern contraceptive methods was high and varied. Many of the women had used contraceptives in the past and planned to use them again in the future. However more male participants were apprehensive about using contraceptives and were advising women against their use. A number of myths were detailed by male participants that contraceptives would endanger the mother, the baby or risk future reproduction. In some communities the men had greater influence in deciding whether to use contraceptives or not, thus emphasising the need to address these myths

specifically with men. In addition, the recommended time of one and a half months after the baby is born to resume or begin using contraceptives was not understood or followed in a number of cases. One participant knew when she should begin using contraceptives but said she had not gone to collect them until four months after the baby was born. Another participant claimed the midwife had told her not to take birth spacing until her period started. Consistency of messages is important for behaviour change and there seems to be some confusion around when to take birth spacing post-delivery.

7.10. Abortion

Some participants felt the government permitted abortion in the health centre but not outside, indicating some level of understanding. However, abortions were viewed as dangerous and immoral regardless of where they took place. Some participants were reluctant to answer questions on abortion. Only one participant mentioned the communication channels as a source of information regarding abortions. A couple from an interview in Kratie stated that a number of abortions were happening outside of the health centre due to the pregnancy being more than three months' gestation.

8. Conclusion

Participants were keen to receive knowledge from the BCC interventions. They enjoyed learning and did their best to change practices in order to improve their own health and the health of their newborn. The village health promotion events were well attended and created an atmosphere which promoted all the other communication methods. The use of prizes motivated the audience to learn and began to create dialogue in the community around RMNH issues. Most prominently, the LDGs and the radio broadcasts were seen as good regular sources of information. Some women displayed feelings of empowerment from gaining new knowledge of RMNH practices which they actively shared with other community members. This enthusiasm should be maximised and integrated into future BCC interventions. Phone communication at the moment depends on the province, gender and culture as to its effectiveness in reaching target audiences. Although SMS/voice messages did not come out strong here, with the right targeting, specifically to men, they could prove to be a good method for communication. Men's groups worked well with IP's and should be considered in Kratie and Stung Treng. Midwives should be better informed to maximise promotion of the media forms as they are a trusted source of information.

VHSG's are part of the overall health system in Cambodia and should be consulted on how to improve interventions in their communities. They worked constantly to ensure pregnant women could access the messages from the interventions, not only in the groups but in community member's homes. Their increased knowledge of healthy RMNH practices will continue to be shared after the project ends ensuring longer term sustainability of the project.

The most significant behaviour change was women attending at the health centre for antenatal checks, delivery and if a danger sign was found. By following this advice, they also received additional RMNH messages from the midwife which they may not have received had they not felt the initial importance to go to the health centre. However, behaviour changes were only achieved if the perceived benefits outweighed the barriers and there had been some shift in social norms. This is common amongst health behaviour interventions and possible barriers or harm reduction approaches should be considered in the planning stage (Fishbein and Yzer 2003). The findings showed that traditional practices, smoking addiction, financial restraints, respect for the elder generation and the need to support family presented challenges to the women changing their behaviour. In addition, other decision makers of RMNH practices such as husbands, mothers and elders in the community should be included in future interventions.

In summary the LDG's together with radio broadcasting reached a number of audiences including men, women, IP's and the wider community. The BCC interventions had a positive influence on most

RMNH practices, but focusing on PNC and healthy diets should be considered in the future. Behaviour change was evident amongst participants as a result of increased knowledge and shifts in attitudes influenced by the BCC interventions.

9. Limitations of the research

Although the research has reached its aims, there were some unavoidable limitations which are listed below along with some mitigating actions:

- There was a lack of baseline data assessing the knowledge and practice of women surrounding RMNH practices which would have served as a means to measure changes in behaviour. Although there was some baseline data collected by MEDIA One, this was limited.
- Due to the cross language, cross cultural nature of the research, local research assistants were engaged in the data collection process adding a subjective layer to the translation process. However, the research assistants were engaged, not merely as translators, but also as interpreters. In order to acknowledge the intersubjective elements between the UK researcher, research assistants and participants, a process of reflexivity was undertaken post interviews as discussed by Temple and Edwards (2002). This included conversations between the researcher and assistant on the contextual and cultural background of interview responses. For more information, see Temple and Edwards (2002).
- Potential self-reporting limitations include recall bias, social desirability bias and errors in self-observation (Nunes *et al.* 2009). This was counteracted as much as possible by structuring questions in ways to reduce the above biases and a preamble explaining to participants that there were no right or wrong answers and that the researchers were not there to judge. The use of open-ended questions and using language that did not have blame implications further reduced this risk. Further examples that were applied to minimise biases may be found in Nunes *et al.* (2009).
- The data collected here is not fully supported with qualitative information measuring behaviour changes and engagement with BCC interventions. However, MEDIA One have collected some quantitative data regarding attendances and attributes of participants in LDG's.
- A limitation of the selection methodology is that there may have been some bias as LDG leaders could have been anxious to demonstrate their worth. In contrast the interviews do represent both positive and negative aspects of the BCC interventions which indicates a wider representation of opinions and outcomes. In addition, the LDG leader's initial selection was not always possible due to availability and in these cases an alternative participant who also fit the criteria was identified through conversations with other community members, which would minimise any bias.

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Appendix 1

Draft Interview Guide for Female Beneficiaries of the MEDIA One BCC intervention

Objectives of the planned evaluation are:

- to seek evidence of changes in knowledge, attitudes and practices as a result of the BCC intervention
- to assess the effectiveness of different communication methods used within the package with different target audiences.

Methodology

6 in-depth interviews in each of the 4 eastern provinces with community members, **including LDG participants and non-participants**, from **ethnic minority and Khmer** majority populations:

- interview topics will include opinions of the different communication methods, questions to assess RMNH knowledge and exploration of any behavioural change as a result of the intervention

Interview participants to be identified through health centre staff and/or PSL staff and to include where possible:

- Married women who have given birth in the last 2 years or are pregnant
- Unmarried women who have given birth in the last 2 years or are pregnant
- Young women who are not yet pregnant
- Women with disability who have given birth in the last 2 years or are pregnant
- Women from IP groups who have given birth in the last 2 years or are pregnant

All words highlighted in yellow are for your instruction only, do not say them to the women, only read them to yourself.

Introduction:

Read the participant information sheet out loud to the participant and ask them to sign or get thumb print on the consent form if they are happy to be interviewed. Do not start the interview until this has been done.

Section 1 - Socio-demographic Information for all participants

1. Which village do you live in?
2. What is your closest health facility?
3. Which health facility do you use the most?
4. Are you married?
5. Are you currently pregnant?
 - a) If yes, how many months?
6. Do you have children? If yes;
 - a) How many children do you have?
 - b) When was your last child born?
7. What do you do for work?
8. How old are you?
9. What is your birth tongue; what other languages do you speak, if any (eg. Tompoun and Jaray)?
10. Do you have a disability? (difficulty with vision, hearing, movement, remembering or thinking, communicating or have problems taking care of themselves alone)
11. Do you own a mobile phone? If yes:

- a) If we sent you a text message right now would you receive it?
- 12. Do you have access to a phone that is not yours?
 - a) If we sent you a text message right now to that phone would you receive it later?
- 13. Do you listen to the radio? If yes
 - a) What channel?
 - b) What time of day do you generally listen to the radio?

Section 2 – ANC, delivery and PNC: For Pregnant woman or woman who has given birth in the last two years

If participant has given birth in the last two years or is pregnant ask these questions

Tell the participant that the next questions will be related to their **last child born** or their **pregnancy experience** so far.

- 1. Tell me about your experience of your current pregnancy, or if not pregnant, when you were last pregnant. From when you first found out you were pregnant to when you gave birth and then for 6 weeks after the baby was born?

If she doesn't tell you in her story, ask her the following questions:

- 2. Did you go to a health facility at any time during your pregnancy, to deliver your baby or after the baby was born?

If she says she did not go to the health facility at all go to Q20.

If she says she has gone to the health facility, ask these questions:

- 3. How did you know you were pregnant?
 - a) Did you have a test?
- 4. When you first went to the health facility, in which month of your pregnancy were you?
- 5. How many times did you go to the health facility during your pregnancy?
- 6. At what stage in your pregnancy were you each time you went to the health facility? (i.e first 3 months, 3-6 months, 6-9 months)
- 7. What made you decide to go to the health facility that many times?
 - a) Did anyone help you decide to go?
 - b) If yes who?
- 8. Which, if any medications were you given while you were there? (Maybe iron or other supplements)
 - c) If yes what was it and how long did you take it for?
 - d) Did you take the medication as you were told or did you stop it sometimes?
 - e) Where and from who did you get it from?
- 9. What challenges make it difficult for you to go to the health facility?

If the woman has already had the baby, ask the following:

- 10. Tell me about your experience in labour and delivery with your last baby?
- 11. Where was your baby delivered?
- 12. Why did you make the choice to have your baby there?
- 13. Who was involved in making the decision to have the baby there?
- 14. Who helped deliver the baby?
- 15. How long did you stay at the health facility after the baby was born?
- 16. Did you go to the health facility again after the baby was born?
 - a. If yes, why did you go, how many times and how soon after the baby was born?
 - b. If no, why did you not go?

If she is still pregnant ask the following:

- 17. What are your plans to deliver your baby?

18. What made you decide to make those plans?
19. Who helped you make those plans?

If the woman did not go to health facility at all ask these questions:

20. How did you find out you were pregnant?
21. Tell me about the delivery of your baby?
22. Where was your baby delivered?
23. Who was involved in making the decision to have the baby there?
24. Why did you decide not to go to a health facility?
25. Who helped deliver the baby?
26. Who do you think women should ask for advice when they are pregnant?
 - f) Why?
27. Which, if any medications did you take during your pregnancy?
 - g) If yes, what was it and how long did you take it for?
 - h) Did you take the medication as you were told or did you stop it sometimes?
 - i) Where did you get the medication?
28. What challenges are there for you to go to the health facility?

Section 3 – Healthy pregnancy and New-born including Danger signs: for Pregnant woman and women who has given birth in the last two years

During pregnancy

The danger signs we are trying to measure include :1. Vaginal bleeding (early or late pregnancy) 2. Anemia 3. Elevated blood pressure, headache, blurred vision, convulsions or loss of consciousness; 4. Fever (during pregnancy and labour); 5. Abdominal pain in early pregnancy; 6. Abdominal pain in later pregnancy; 7. Difficulty in breathing; 8. Loss of fetal movements 9. Water breaking early.DO NOT SAY THESE SIGNS TO THEM, WAIT TO SEE WHAT THEY SAY FIRST.

Knowledge:

1. Can you tell me any signs that mean something is wrong when you are pregnant?
2. How did you learn about these?
3. Can you think of anymore? (keep asking this question to get as many answers as possible)
4. What foods do you think a woman should eat to stay healthy?
 - a. Give examples
5. What things should a woman **not do** while pregnant to make sure she stays healthy?
6. How did you learn about this information?
7. What should a woman think about when making preparation plans for the newborn?
8. What do you think a woman should do to have a healthy pregnancy?
9. Who should you ask for advice when you find a danger sign when pregnant?
10. What signs should a woman look for to know the baby is coming and you are in labour?

Practice:

11. Did you ever find one of these signs during your pregnancy?
 - a. If yes, what happened and what did you do?
12. What did/are you do during your pregnancy to stay healthy?
13. What foods did/do you eat during your pregnancy?
14. Did/do you drink or smoke during your pregnancy?
15. How long did you work for before the baby was born?
16. Before the baby was born did/do you make a plan to prepare for the new baby?
 - a. If yes, what was in the plan?
 - b. If no, why not?

17. What was the first sign that informed you that you were in labour? (if she is pregnant don't ask this question)
 - a. What did you do after seeing or feeling this sign?
18. Did you breastfeed your baby? (if she is pregnant ask does she plan to breastfeed?)
 - a. If yes was it only breastfeeding or sometimes bottle feeding too?
 - b. How long did you breastfeed your baby?
 - c. If she stopped, ask why?
19. Did you practice roasting after the baby was born? (if she is pregnant ask if she plans to practice roasting?)

Danger signs for the newborn baby and mother after delivery: for Pregnant woman or women who has given birth in the last two years

The danger signs we are trying to measure for the new-born include: low or high body temperature (baby too hot or too cold), yellow skin and yellow eyes, vomiting, swollen stomach, bleeding, pale skin, baby not moving much, baby having trouble feeding, or umbilical cord problems: redness, swelling, pus discharge.

The danger signs for the mother include: heavy bleeding, discharge from vagina with bad smell, fever, headache, blurred vision, swollen face, hands or feet, and convulsions.

Knowledge:

20. Can you tell me any signs that means something is wrong with the baby?
21. How did you learn about these?
22. Can you think of anymore? (keep asking this question to get as many answers as possible)
23. What are some things you should do to make sure your baby stays healthy?
- 24.** Where did you hear advice on how to keep your baby healthy?
25. What should women do if they find a danger sign in their baby?
26. Can you tell me any danger signs for the mother after the baby is born?

Practice:

27. Did you ever find one of these signs during the first month of your baby's life? (if she is pregnant don't ask)
 - a. If yes, what happened and what did you do?
28. What did you do to make sure your baby is healthy? (if she is still pregnant ask what she will plan to do?)
29. Did/will you rub anything on the babies naval?
 - b. If yes or no what and why? (if she is pregnant ask her if she plans to put anything on the baby's navel)

Section 4 - Birth spacing awareness for all participants including young women who are not pregnant yet

Tell the participant the next questions are about birth spacing, ask her to answer honestly and tell her again the interview is confidential and her name will never be used.

1. What do you know about birth spacing?
2. How did you find out about birth spacing?
3. Have you ever used birth spacing?

If she answers no go to Q8.

If she answers yes, ask these questions:

4. What method did you use and why? (possible methods: traditional or modern methods, daily and monthly pills, injection, IUDs, implants, sterilisation, or vasectomy to prevent unwanted pregnancies)
5. Where do you get your birth spacing?
6. Are there any challenges to accessing or using birth spacing?
 - a. If yes, what are they?
7. How did you find out about birth spacing?

If she answers no, ask these questions:

8. Why do you not use birth spacing?
9. Do you know where to get birth spacing?

Section 5 – Abortion services for all participants

These questions will be asked even if they have not used abortion services.

Tell the participant the next questions are about abortion services, ask her to answer honestly and tell her again the interview is confidential and her name will never be used.

1. What do you know about abortion in Cambodia?
2. Is abortion legal or illegal in Cambodia?
3. Where did you learn about abortion?
4. Have you or anyone you know ever asked about abortion or used abortion services in a health facility, maybe by taking a pill or having a small operation?
 - a. If yes, ask what happened and where did the abortion take place?
5. Have you or anyone you know ever tried to have an abortion using traditional methods?
 - a. If yes tell me about the experience, where it took place and by who?
6. Do you think abortion can be safe or dangerous?
 - a. If yes or no, why and where?

Section 6 – Communication methods for all participants

1. Have you ever heard anything about mother or newborn health on the TV, radio or in a group, by text message or in a community fair?

If the answer is no go to Q5.

If the answer is yes, ask these questions:

2. What did you hear and who was talking?
3. What did you learn?
4. Is there anything else you would like to learn about mother or newborn health?

If the answer is no, ask these questions:

5. Do you know anyone who has talked about any of these?
 - a. If yes, ask what did they talk about?

Section 7 – Listening and Dialogue groups for all participants

1. Did you attend a group that listened to a radio show about mother and child health (LDG) and then had a discussion afterwards?

If she answers no go to Q 15.

If the answer is yes, ask these questions:

2. How did you know about the group?
3. How many times did you attend?
4. What did you do at the groups?

5. What did you learn at the groups?
6. Who, if anyone went with you to the groups?
7. Did you talk to anyone else about what you learned in the groups?
 - a. If yes, what did you talk about and with who?
8. Did you enjoy or not enjoy the groups?
 - a. If yes or no, why?
9. Would you recommend that other people attend the groups?
 - a. If yes or no, why?
10. What was the best thing about the groups?
11. What was the thing you liked least about the groups?
12. Was there anything that stopped you going to the group?
 - a. If yes, what was that?
13. How could the groups be made better?
14. Did you do anything different after what you learned in the group?

If she answers No, ask these questions.

15. Have you heard about these groups?
16. If yes, why did you not attend?
17. Do you think they are a good thing or not?

Section 8 – Voice/ Text message for all participants

1. Did you ever receive a voice/ text message with information about mother or child health?
 - a. If yes, what was the message about?
2. Did you learn from the message?
 - a. If yes, what did you learn?
3. Did you share the information from the message with anyone else?
 - a. If yes who did you share it with and what did you tell them?

Section 9 – Community fair for all participants

1. Did you ever go to a community fair about mother and newborn health in your village?
 - a. If yes, what was talked about?
2. Did you learn from the fair?
 - a. If yes, what did you learn?
3. Did you share the information from the message with anyone else?
 - a. If yes who did you share it with and what did you tell them?

Section 10 - Overall opinions for all participants

1. How was the father of your baby involved in your pregnancy?
2. Did he make any decisions about the baby's birth or about taking the baby to a health facility?
 - a. If yes can you tell me some examples?
 - b. If no, why not?
3. Is/was the father of your baby helpful or unhelpful during your pregnancy, delivery or with your newborn?
 - a. Why?

If the woman has had more than one child, ask these questions:

4. How did your experience with the last child born compare with your previous childrens' pregnancy and birth?
5. Did you do anything different?
 - a. If yes, what was it?

6. What do you think is a good way to help mothers and fathers to learn about healthy pregnancy and baby?
7. What do you think is a good way to learn about birth spacing and abortion?

Thank you for giving the time for this interview. Is there anything you would like to ask me?

Appendix 2

Draft Interview Guide for Male Beneficiaries of the MEDIA One BCC intervention

Objectives of the planned evaluation are:

- to seek evidence of changes in knowledge, attitudes and practices as a result of the BCC intervention
- to assess the effectiveness of different communication methods used within the package with different target audiences.

Methodology

6 in-depth interviews in each of the 4 eastern provinces with community members, **including LDG participants and non-participants**, from **ethnic minority and Khmer** majority populations:

- interview topics will include opinions of the different communication methods, questions to assess RMNH knowledge and exploration of any behavioural change as a result of the intervention

Interview participants to be identified through health centre staff and/or PSL staff and to include where possible:

- Married men with wives who have given birth in the last 2 years or are pregnant
- Men with wives who have a disability who have given birth in the last 2 years or are pregnant
- Married men with wives from Indigenous population groups who have given birth in the last 2 years or are pregnant

All words highlighted in yellow are for your instruction only, do not say them to the women, only read them to yourself.

Introduction:

Read the participant information sheet out loud to the participant and ask them to sign or get thumb print on the consent form if they are happy to be interviewed. Do not start the interview until this has been done.

Section 1 - Socio-demographic Information for all participants

1. Which village do you live in?
2. What is your closest health facility?
3. Which health facility do you use the most?
4. Are you married?
5. Is your wife currently pregnant?
 - a) If yes, how many months?
6. Do you have children? If yes;
 - a) How many children do you have?
 - b) When was your last child born?
7. What do you do for work?
8. How old are you?
9. What is your birth tongue; what other languages do you speak, if any (e.g. Tompoun and Charay)?
10. Do you or your wife have a disability? (difficulty with vision, hearing, movement, remembering or thinking, communicating or have problems taking care of themselves alone)
11. Do you own a mobile phone? If yes:
 - a) If we sent you a text message right now would you receive it?
12. Do you have access to a phone that is not yours?

- a) If we sent you a text message right now to that phone would you receive it later?
- 13. Do you listen to the radio? If yes
 - a) What channel?
 - b) What time of day do you generally listen to the radio?

Section 2 – ANC, delivery and PNC: For men with Pregnant wife or wife who has given birth in the last two years

If the man's wife has given birth in the last two years or is pregnant ask these questions

Tell the participant that the next questions will be related to their **last child born** or their experience of their wives' **pregnancy** so far.

- 1. Tell me about your experience of your wife's current pregnancy, or if she is not pregnant, when she was last pregnant. From when you first found out she was pregnant to when she gave birth and then for 6 weeks after the baby was born?

If he doesn't tell you in his story, ask him the following questions:

- 2. Did your wife go to a health facility at any time during the pregnancy, to deliver your baby or after the baby was born?

If he says they did not go to the health facility at all go to Q18.

If he says they have gone to the health facility, ask these questions:

- 3. How did you know your wife was pregnant?
 - a) Did she have a test to see if she was pregnant? If yes where did she do the test?
 - b) If she had a test, did you ask her to have a test or did she do it without you?
- 4. When your wife first went to the health facility, in which month of her pregnancy was she?
 - a) How many times did she go?
 - b) Did you go with her sometimes or all the times?
- 5. At what stage in your wife's pregnancy was she each time you went to the health facility with her? (i.e first 3 months, 3-6 months, 6-9 months)
- 6. What made you and your wife go to the health facility that many times?
- 7. Was your wife given any medications during her pregnancy? (Maybe iron or other supplements)
 - j) Where did she receive it and who gave it to her?
 - k) If yes what was it and how long did she take it for?
 - l) As far as you are aware did she take the medication as she was asked or did she stop it sometimes?
- 8. What challenges make it difficult for you and/or wife to go to the health facility?

If the man's wife has already had the baby, ask the following:

- 9. Tell me about your experience of your wife's labour and delivery with your last baby?
- 10. Where was your baby delivered?
- 11. Who was involved in making the decision to have the baby there?
 - a) For what reasons?
 - b) Did you go with her or did someone else go? If someone else, who?
- 12. Who helped deliver the baby?
- 13. How long did your wife stay at the health facility after the baby was born?
 - a) Did you stay with her? If yes or no, why?
- 14. Did your wife go to the health facility again after the baby was born?
 - c. If yes, why did she go, how many times and how soon after the baby was born?
 - d. If no, why did she not go?

If his wife is still pregnant ask the following:

15. What are the plans to deliver your baby?
16. What made you and your wife decide to make those plans?
17. Who, if anyone helped you make those plans?

If his wife did not go to health facility at all ask these questions:

18. How did your wife find out she was pregnant?
19. Tell me about the delivery of your baby?
20. Where was your baby delivered?
21. Who was involved in making the decision to have the baby there?
22. Why did you and your wife decide not to go to a health facility?
23. Who helped deliver the baby?
24. Who do you think women and their families should ask for advice when they are pregnant?
 - m) Why?
25. Which, if any medications did your wife take during her pregnancy?
 - n) If yes, what was it and how long did she take it for?
 - o) Did she take the medication as she was asked or did she stop it sometimes?
 - p) Where did she get the medication?
26. What challenges are there for you and your wife to go to the health facility?

Section 3 – Healthy pregnancy and New-born including Danger signs: for men who have wives that are Pregnant or wives who have given birth in the last two years

During pregnancy

The danger signs we are trying to measure include :1. Vaginal bleeding (early or late pregnancy) 2. Anemia 3. Elevated blood pressure, headache, blurred vision, convulsions or loss of consciousness; 4. Fever (during pregnancy and labour); 5. Abdominal pain in early pregnancy; 6. Abdominal pain in later pregnancy; 7. Difficulty in breathing; 8. Loss of fetal movements 9. Water breaking early.DO NOT SAY THESE SIGNS TO THEM, WAIT TO SEE WHAT THEY SAY FIRST.

Knowledge:

1. Can you tell me any signs that mean something is wrong during pregnancy?
2. How did you learn about these?
3. Can you think of anymore? (keep asking this question to get as many answers as possible)
4. What foods do you think a woman should eat to stay healthy?
 - a. Give examples
5. What things should a woman **not do** while pregnant to make sure she stays healthy?
6. How did you learn about this information?
7. What should a family think about when making preparation plans for the newborn?
8. How can you help your wife to have a healthy pregnancy?
9. Who should you ask for advice when you find a danger sign during your wife's pregnancy?
10. What signs should you and your wife look for to know the baby is coming and she is in labour?

Practice:

11. Did you or your wife ever find one of these signs during your wife's pregnancy?
 - c. If yes, what happened and what did you or your wife do?
12. What foods did your wife eat during your pregnancy?
 - a. Do you think these were the right foods to eat?
 - b. Did you help your wife get good food? If yes, what did you do?
13. Did/do your wife drink or smoke during her pregnancy?
14. Did you smoke or drink during her pregnancy?

- a. If yes where did you smoke or drink?
15. Before the baby was born did/do you and your wife make a plan to prepare for the new baby?
 - a. If yes, what was in the plan?
 - b. If no, why not?
16. What was the first sign that informed you that your wife was in labour? (if his wife is pregnant don't ask this question)
 - a. What did you do after seeing this sign?
17. Did your wife breastfeed your baby? (if his wife is pregnant ask do they plan to breastfeed?)
 - a. If yes was it only breastfeeding or sometimes bottle feeding too?
 - b. How long did she breastfeed your baby?
 - c. If she stopped, ask why?
18. Did your wife practice roasting after the baby was born? (if his wife is pregnant ask if she plans to practice roasting?)

Danger signs for the newborn baby and mother after delivery: for the men with a wife who is Pregnant or a wife that has given birth in the last two years

The danger signs we are trying to measure for the new-born include: low or high body temperature (baby too hot or too cold), yellow skin and yellow eyes, vomiting, swollen stomach, bleeding, pale skin, baby not moving much, baby having trouble feeding, or umbilical cord problems: redness, swelling, pus discharge.

The danger signs for the mother include: heavy bleeding, discharge from vagina with bad smell, fever, headache, blurred vision, swollen face, hands or feet, and convulsions.

Knowledge:

19. Can you tell me any signs that means something is wrong with the baby?
20. How did you learn about these?
21. Can you think of anymore? (keep asking this question to get as many answers as possible)
22. What are some things you should do to make sure your baby stays healthy?
23. Where did you hear advice on how to keep your baby healthy?
24. What should you do if you find a danger sign in your baby?
25. Can you tell me any danger signs for the mother after the baby is born?

Practice:

26. Did you ever find one of these signs during the first month of your baby's life? (if she is pregnant don't ask)
 - b. If yes, what happened and what did you do?
27. What did you do to make sure your baby is healthy? (if his wife is still pregnant ask what he will plan to do?)
28. Did/will you or your wife rub anything on the babies naval?
 - d. If yes or no what and why? (if his wife is pregnant ask her if she plans to put anything on the baby's navel)

Section 4 - Birth spacing awareness for all participants

Tell the participant the next questions are about birth spacing, ask him to answer honestly and tell him again the interview is confidential and his name will never be used.

1. What do you know about contraception or birth spacing?
2. How did you find out about birth spacing?
3. Have you or your wife ever used birth spacing?
4. Have you ever used condoms?

If he answers no go to Q9.

If he answers yes ask these questions:

5. What method did you or your wife use and why? (possible methods: traditional or modern methods, daily and monthly pills, injection, IUDs, implants, sterilisation, or vasectomy to prevent unwanted pregnancies)
6. Where do you get your birth spacing or condoms?
7. Are there any challenges to accessing or using birth spacing or condoms?
 - a. If yes, what are they?
8. How did you find out about birth spacing?

If she answers no ask these questions:

9. Why do you not use birth spacing?

Section 5 – Abortion services for all participants

These questions will be asked even if they have not used abortion services.

Tell the participant the next questions are about abortion services, ask him to answer honestly and tell him again the interview is confidential and his name will never be used.

1. What do you know about abortion in Cambodia?
2. Is abortion legal or illegal in Cambodia?
3. Where did you learn about abortion?
4. Do you think abortion can be safe or dangerous?
 - a. If yes or no, why and where?

Section 6 – Communication methods for all participants

1. Have you ever heard anything about mother or newborn health on the TV, radio or in a group, by text message or in a community fair?

If the answer is no go to Q5.

If the answer is yes ask these questions:

2. What did you hear and who was talking?
3. What did you learn?
4. Is there anything else you would like to learn about mother or newborn health?

If the answer is no ask these questions:

5. Do you know anyone who has talked about any of these?
 - a. If yes, ask what did they talk about?

Section 7 – Listening and Dialogue groups for all participants

1. Did you attend a group that listened to a radio show about mother and child health (LDG) and then had a discussion afterwards?

If she answers no go to Q 15.

If the answer is yes ask these questions:

2. How did you know about the group?
3. How many times did you attend?
4. What did you do at the groups?
5. What did you learn at the groups?
6. Who, if anyone went with you to the groups?
7. Did you talk to anyone else about what you learned in the groups?
 - a. If yes, what did you talk about and with who?

8. Did you enjoy or not enjoy the groups?
 - a. If yes or no, why?
9. Would you recommend that other people attend the groups?
 - a. If yes or no, why?
10. What was the best thing about the groups?
11. What was the thing you liked least about the groups?
12. Was there anything that stopped you going to the group?
 - a. If yes, what was that?
13. How could the groups be made better?
14. Did you do anything different after what you learned in the group?

If he answers No, ask these questions.

15. Have you heard about these groups?
16. If yes, why did you not attend?
17. Do you think they are a good thing or not?

Section 8 – Voice/ Text message for all participants

1. Did you or your wife ever receive a voice/ text message with information about mother or newborn health?
 - a. If yes, what was the message about?
2. Did you learn from the message?
 - a. If yes, what did you learn?
3. Did you share the information from the message with anyone else?
 - a. If yes who did you share it with and what did you tell them?

Section 9 – Community fair for all participants

1. Did you ever go to a community fair about mother and newborn health in your village?
 - a. If yes, what was talked about?
2. Did you learn from the fair?
 - a. If yes, what did you learn?
3. Did you share the information from the message with anyone else?
 - a. If yes who did you share it with and what did you tell them?

Section 10 - Overall opinions for all participants

1. What did you do to help your wife during her pregnancy?
2. Did you make any decisions about the baby's birth or about taking the baby to a health facility?
 - a. If yes can you tell me some examples?
 - b. If no why not?

If he has had more than one child ask these questions:

3. How did your experience with the last child born or your wife's current pregnancy compare with your wife's previous pregnancy and birth for your other children?
4. Did you or your wife do anything different?
 - a. If yes, what was it?
5. What do you think is a good way to help mothers and fathers to learn about healthy pregnancy and baby?

Thank you for giving the time for this interview. Is there anything you would like to ask me?

Appendix 3

Participatory Workshop Guide for PSL MEDIA One BCC activities

The following is a semi-structured guide for 4 focus groups to identify the progress and impacts of the BCC activities in each province through the eyes of key providers engaged in the project. It will be applied and adapted for each province accordingly and will be flexible in its delivery. Full training will be given to Khmer Research Assistants in order to conduct the focus groups in an appropriate manner that will maximise understanding and interpretation of answers.

Possible participants: RMNH service providers; Midwives, VHSG volunteers, village agents (for VSLAs) BCC Officers, CBD's – Maximum of 8 participants

Stage 1 – Introduction and workshop aims

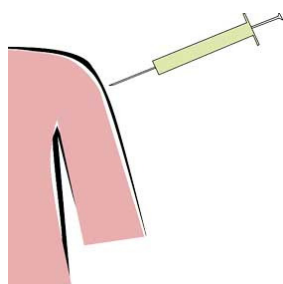
1. Introduce yourselves and explain that the purpose of the workshop is to evaluate the MEDIA One activities in this province. The broad objectives are:
 - a. to seek evidence of changes in knowledge, attitudes and practices as a result of the BCC intervention
 - b. to assess the effectiveness of different communication methods used within the package with different target audiences.
2. Ask if anyone has any questions. Then start warm up activity of your choice.
3. Ask everyone to sit down and to tell the group one by one:
 - a. What their role is?
 - b. What they have done as part of the MEDIA one project?
 - c. How long they have worked on the MEDIA one project
 - d. How they became involved in the project?

Record each of the groups answers on a flip chart.

4. Now ask the group what they think are the aims of the MEDIA One project, write them down on another flip chart as they say them. This is likely to include the following areas:
 - a. Healthy pregnancy
 - b. Healthy newborn
 - c. Danger signs for pregnancy and newborn
 - d. Abortion
 - e. Birth spacing access and use

Stage 2 – Understanding of key messages

Ask the group to draw some of the key messages that the MEDIA One project was and still is trying to communicate to the villagers and place them into groups as mentioned above. Give them an example like:



Ensure that everyone contributes and when they have done some, ask them to do more until you think they have no more suggestions left. If they don't want to draw ask them to write or to tell you. Collect all drawings, writings and verbal descriptions on the paper.

Now ask the group to discuss the following questions and record their answers:

1. What RMNH messages do you think was most understood in the community?
2. What RMNH messages do you think were least understood by the community?
3. What messages should be the focus moving forward?

Stage 3 – Opening the discussion

Ask the group to write on post notes (alone or in two's) the following:

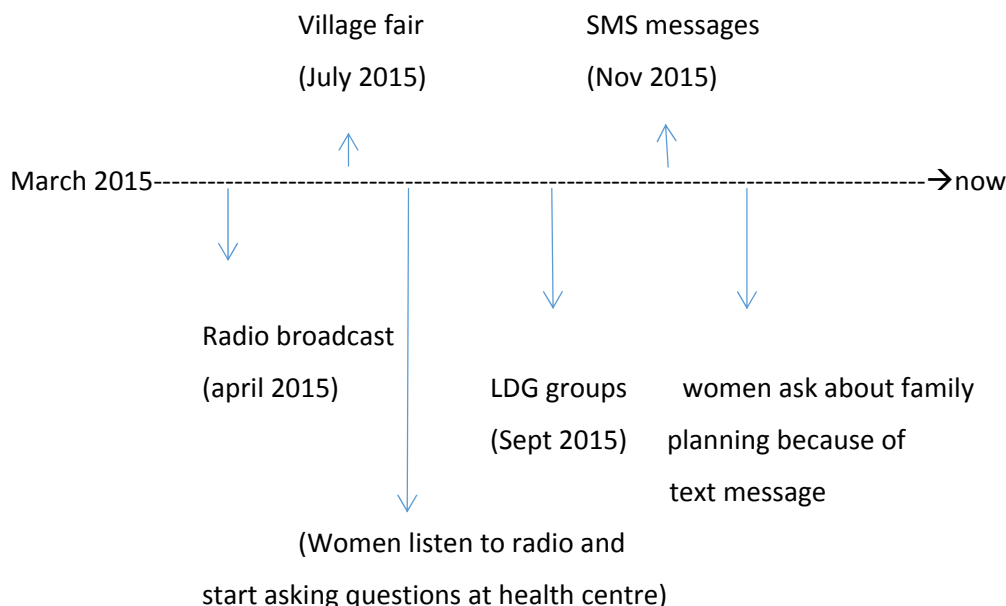
- Three things that were important to the MEDIA One project success
- Three things that you want to share about the MEDIA one project
- Three challenges for the MEDIA One project

Give the group plenty of time to complete this task. Ask everyone to put the notes in the middle of the table, no need to write their name on the notes. Start to read out the notes one at a time. As you read them out discuss them with the group and write down what they say. Make a heading on a flip chart and write a summary of the notes. Ask the group if the summary is a good one and if they want to add anything.

Stage 4 – History of Media One project using a Timeline

As a group draw a timeline from the beginning of the MEDIA one project until now. On the timeline ask everyone to write on the paper when each communication method started for that province. Also put notes about any training for the health centre, VHSG or other. Ask them to also add any key points of the project that helped the project move forward.

For example:



Stage 5 – Communication methods

In the following chart which will be prepared by you before the focus group, add in the communication method they mentioned in the previous timeline exercise and then ask the questions. Write the answers in the box next to the method and the question. This is an example:

Communication method	Radio	Text message	LDG groups	Printed material
What was good about this communication method?				
What was not so good about this communication method?				
Did the people understand the messages from this communication method?				
Did you see any changes in peoples behaviour after hearing the messages? Describe.				
Do you think people had exposure to this communication method? How much?				
Do you think this is a good communication method, did it work well?				
How could it be made better?				
Should the communication method be repeated?				

Stage 6 – Learning as part of the project

Ask the group in twos to discuss the following questions, write the questions on the board, after they are finished ask them to report their discussion to the group. Walk around the group as they are discussing and make sure they understand the questions and are discussing them.

1. What did you learn by being part of the MEDIA one project?
2. What skills do you have now after working with the MEDIA one project?
3. Have you changed anything in your work after being part of the MEDIA one project?
4. Have you shared the information you learnt with other people and if so who did you share it with? (work colleagues or friends, family, villagers)
5. How did you promote the different communication methods and the MEDIA One campaign?
6. What do you suggest would be good for the MEDIA One activities moving forward?

Stage 7 – Next steps

As a group discuss what will happen over the next 3 months for the MEDIA One project. What will each person be doing, go around the group one by one to ask this. Let them tell you and you record their answers. When they are finished show them what you recorded and ask them if it is correct.

Step 8 – Anything else

Ask the group if there is anything else they would like to share about the programme and record anything they say.

Appendix 4

Participatory Workshop Guide PSL BCC activities - MEDIA One Staff

Stage 1 – Introduction and workshop aims

1. Introduce yourself and explain what the purpose of this evaluation is and describe the main objectives:
 - a. to seek evidence of changes in knowledge, attitudes and practices as a result of the BCC intervention
 - b. to assess the effectiveness of different communication methods used within the package with different target audiences.
2. Explain this focus group will help add context and further understanding of the programme, it will also give MEDIA one the chance to share their thoughts of the project and the communications used.
3. Ask if anyone has any questions.
4. Ask everyone to sit down and to tell the group one by one:
 - a. What their role is?
 - b. What they have done as part of the PSL project?
 - c. How long they have worked on the PSL project

Stage 2 –Timeline

Draw a timeline and add the key points of the project from the start of the Save the children contract to the CARE contract and then all the stages in between. This includes planning, implementation, monitoring, reporting and any changes during the programme.

Using the timeline as a reminder ask the following questions:

- What worked well?
- What are you proud of?
- What were the challenges?
- What would you do differently?
- What do you think is important to understand the project better?

Stage 3 – Communication methods

Using flip charts write each communication method in the centre of the page on a separate chart (Radio broadcasts, listening groups, village fairs, voice/text messages and printed media) and ask everyone to write on each chart:

- the positives of using this method to communicate RMNH messages
- the negatives/challenges of using this method to communicate RMNH messages
- the audience it was intended for and the actual audience reached
- key people involved in making the communication method work well
- What would make the communication method more effective in reaching the target audience?
- If something was not effective, if it was modified do you think it could be more effective and should then be used”?

Stage 4 – Most significant change

‘During the last year, in your opinion, what was the most significant change in RMNH behaviours/choices that took place for participants?’

Why do you consider that particular change to be the most significant one?